THE MONTHLY JOURNAL FOR MANUFACTURERS AND DESIGNERS

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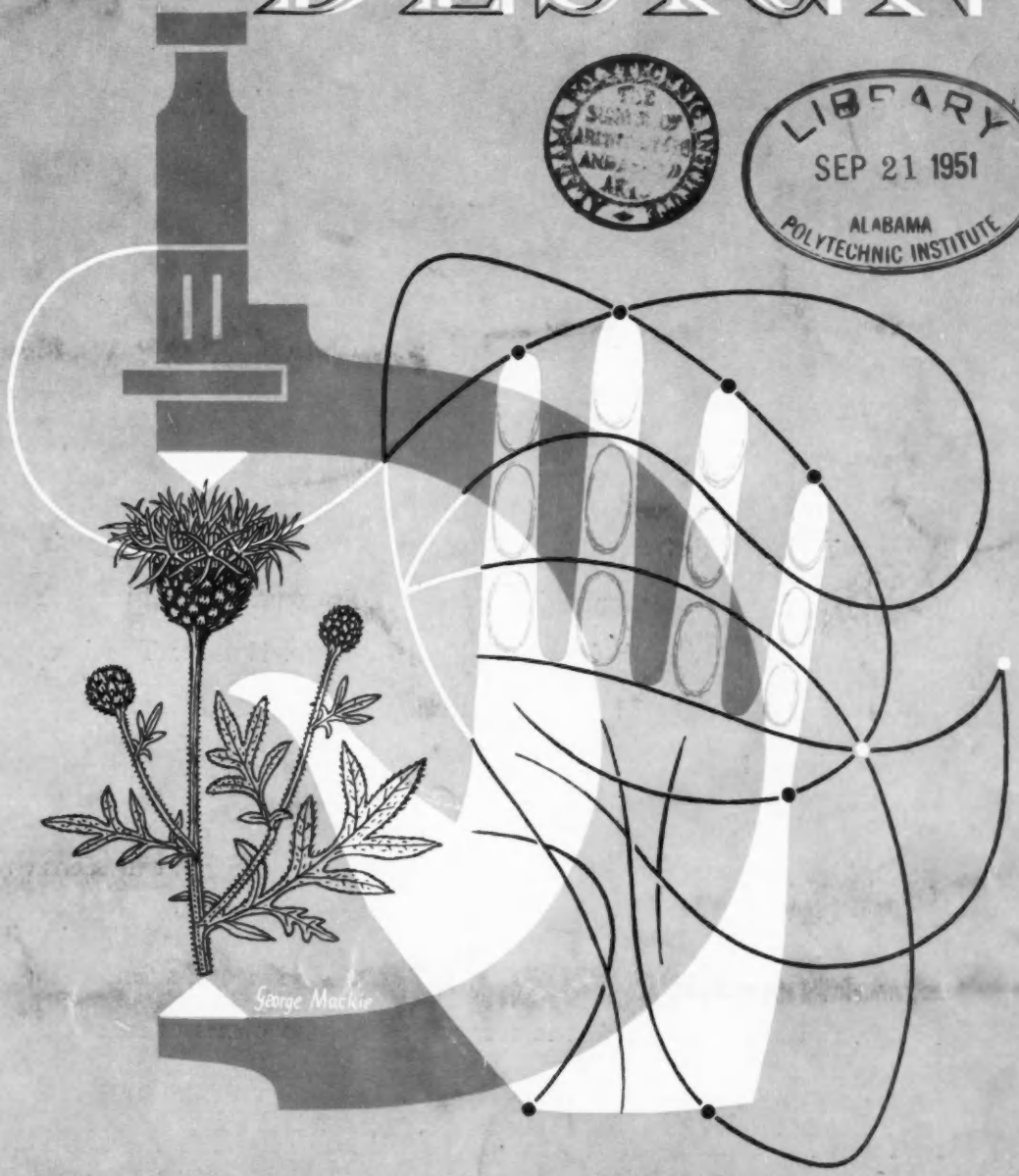

SCOTTISH NUMBER

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Design

THE MONTHLY JOURNAL FOR MANUFACTURERS AND DESIGNERS

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EDITOR: Alec Davis

EDITORIAL OFFICES: Tilbury House, Petty France, London SW1. Telephone: WHItehall 6322

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SCOTTISH NUMBER

Wyndham Goodden, Chief Officer of the Council of Industrial Design, Scottish Committee, has co-operated as Guest Editor in the production of this special Scottish issue of DESIGN.

With the exception of the leading article on pages 1–2 and Notebook on page 37, all the material for this number was arranged by the staff of the Scottish Committee under Mr Goodden.

The cover design is by George Mackie, MSIA, of Edinburgh.

Many of the photographs (including the colour pictures on pages 5-8) were specially taken by Studio Swain, Glasgow

Living Traditions

It is not the bulk of a fabric, the richness and quantity of the materials, the multiplicity of lines, nor the gaudiness of the finishing that give grace or beauty or grandeur to a building, but the proportion of the parts to one another and to the whole, whether entirely plain or enriched with a few ornaments properly disposed.
James Gibb, 1728.

THE 1951 FESTIVAL EXHIBITION of Scottish Architecture and Crafts in the Royal Scottish Museum, Edinburgh, is perhaps the most satisfying of all the Festival Exhibitions because it is also the most modest and the most selective. Moreover, its gentle title—"Living Traditions"—sums up in two words what we have been trying to say in thirty-two issues.

It is an exhibition of real quality. From the quiet anonymity of its setting, which is enjoyed with, but not before, the exhibits, to the loving care in the selection of what is shown, the hand is evident throughout of someone (our guess is that it was not a committee) who understands the true meaning of quality and design: the right doing of what is worth doing, as Lethaby called it. Here we have grace and beauty and even grandeur stemming from generations of modest men and women who mastered their crafts to their own satisfaction, undistracted by worldly values and social aspirations; and because they kept their eye on the ball, not on the pavilion, these old Scottish craftsmen and their descendants have scored heavily in the markets of the world.

And yet one should be disturbed by this exhibition. For all the care that has been taken in matching the new with the old, for all the efforts of the Scottish Committee of the Council of Industrial Design to stimulate contemporary craftsmanship, the thread of living tradition is seen to be broken in many of the crafts on view. Whether traditions can be or should be revived is open to argument; it may be that any revival, unless it comes naturally and instinctively, will appear in the result to be artificial and strained. If the fisherwomen of Arbroath were to stop making their bulging armcreels and the only examples were to survive in some Scottish museum, it is doubtful whether any amount of propaganda and research could bring the basket back to life. The new can challenge the old only where the tradition has been uninterrupted and, not unexpectedly, the tradition is shown to be uninterrupted only in the humbler, more utilitarian

crafts, in the shawls and baskets and simple drinking vessels.

That the organisers were aware of these limitations and that they do not put all their faith in revivals is witnessed by the inclusion of a contemporary living room as part of the exhibition. Here there is good evidence of what appears to be a new Scottish tradition—a tradition of leadership in the design and manufacture (by machine as well as by hand) of contemporary furniture and furnishings.

A great deal of the credit for this advance must go to the Scottish Committee of the Council of Industrial Design and to its Chief Officer, Wyndham Goodden, whose resignation to take up the Directorship of the Rayon Industry Design Centre has recently been announced. Had it not been for the great national exhibition "Enterprise Scotland," with which Mr Goodden was associated in 1947, and for the successful Scottish Furniture Manufacturers' Competition, which was held in 1949, it is possible that the Scottish tradition of furniture-making would have remained one of quality of materials and craftsmanship only, with design taking a back seat. As it is, Scotland has given a strong lead to the rest of Britain.

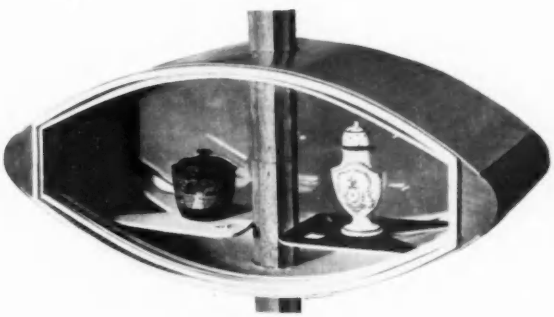
DESIGN has already recognised and reviewed this lead and it is not reported again in this special Scottish number but no assessment of industrial design in Scotland would be complete without reference to furniture and interior design. Both have very properly been included in the exhibition of "Living Traditions," for both today measure up to the wisdom of James Gibb quoted at the head of this article. And because we have lifted this quotation off the walls of the Edinburgh exhibition, which with rare imagination and industry has been captioned throughout with apposite quotations from past and present critics of design, we return the compliment with some words of Confucius which might well have been used to introduce this fine display of Scottish craftsmanship:

Then said the King of Ts'i to Confucius: "How may I recognise a good craftsman?" Confucius replied: "Firstly by the great reputation of his ancestors for honesty and sincerity. Then by his ability to create something new with an experience that is old." P. R.

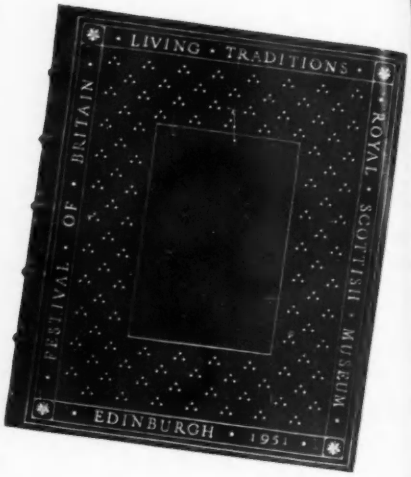
LIVING TRADITIONS. *The two scenes above and on left set the tone for the whole of this Festival exhibition of Scottish architecture and crafts: crafts which are not artificially preserved but play a part in the working life of the Scottish countryman and the islander*

(Above) In this display of traditional Scottish products against a photographic background of Scottish architecture, note, on right, the seventeenth-century cradle; beyond it, a Shetland kishie (cane basket), and an Orcadian chair, in a shape which is traditional but still valid

(Left) The boat here, built specially for the exhibition by Thomas Moncrieff, is known as a whillie—the smallest traditional Shetland boat, of Viking ancestry. The mural painting is by Leonard Rosoman



(Above) Twentieth-century setting for eighteenth- and nineteenth-century pottery: a typical display case, attached to a supporting column. In the picture on left, the same case can be recognised in the middle distance. Display tables and showcases in the foreground achieve a high standard of elegance which might well carry over to museum display. By Robert Nicholson, MSIA, *and Roger Nicholson,* ARCA, *the designers of the Exhibition*



Even the visitors' book was designed as an exhibit—to show contemporary Scottish skill in the ancient craft of bookbinding. Bound in blue Morocco leather by Rennie Ross-Stevenson, Edinburgh

Three chairs, all designed by architects. Left, by Sir Robert Lorimer; made by Whytock and Reid early in the present century. Centre, by the Glasgow architect and pioneer of the modern movement, Charles Rennie Mackintosh; of approximately the same date. Right, by Dennis Lennon, 1951. The inclusion of this contemporary chair in the exhibition is a tribute to the reputation for design which Scottish furniture manufacturers have established in post-war years

A peat basket of straw and string, made by James Petersen, Shetland

Lent by the Company of Merchants of the City of Edinburgh; a silver-gilt goblet by John Leslie Auld

FIFTY YEARS OF

Design in Scotch Tweeds

Reviewed by W. P. H. Sinclair, BSc, ATI

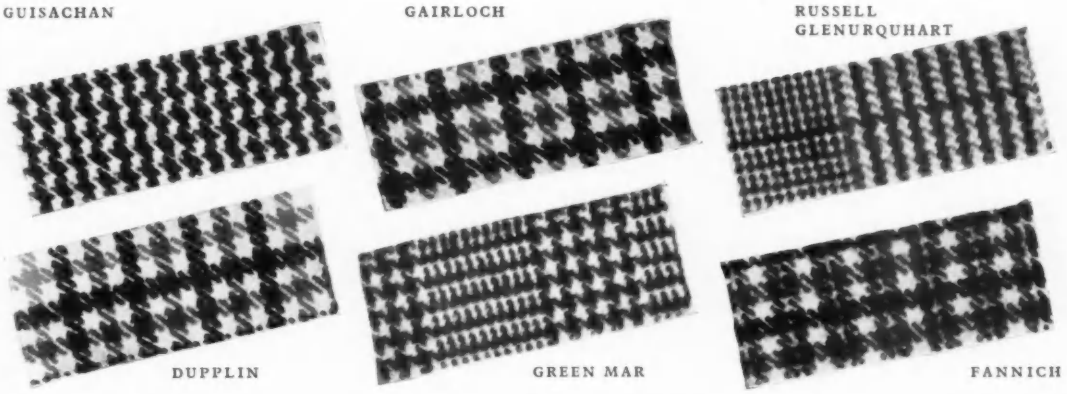
SCOTTISH WOOLLENS are made in a full range of wool qualities, from the fine soft-handling Saxony to the bright crisp-handling Cheviot quality—and not excluding the rough, "homespun" type of cloth. Today, tweeds are mostly finished to show colours and styling smart and clear, although some makes are designed for a dense nap of surface fibres.

Scotch tweeds are traditionally cloths for men's wear, in twill weave; and for suitings there has long been a separation into lounge wear and sports wear. The characteristics have been quieter styling and softer colouring for the former; by comparison, sports cloths have favoured bold colours and more strident patterns.

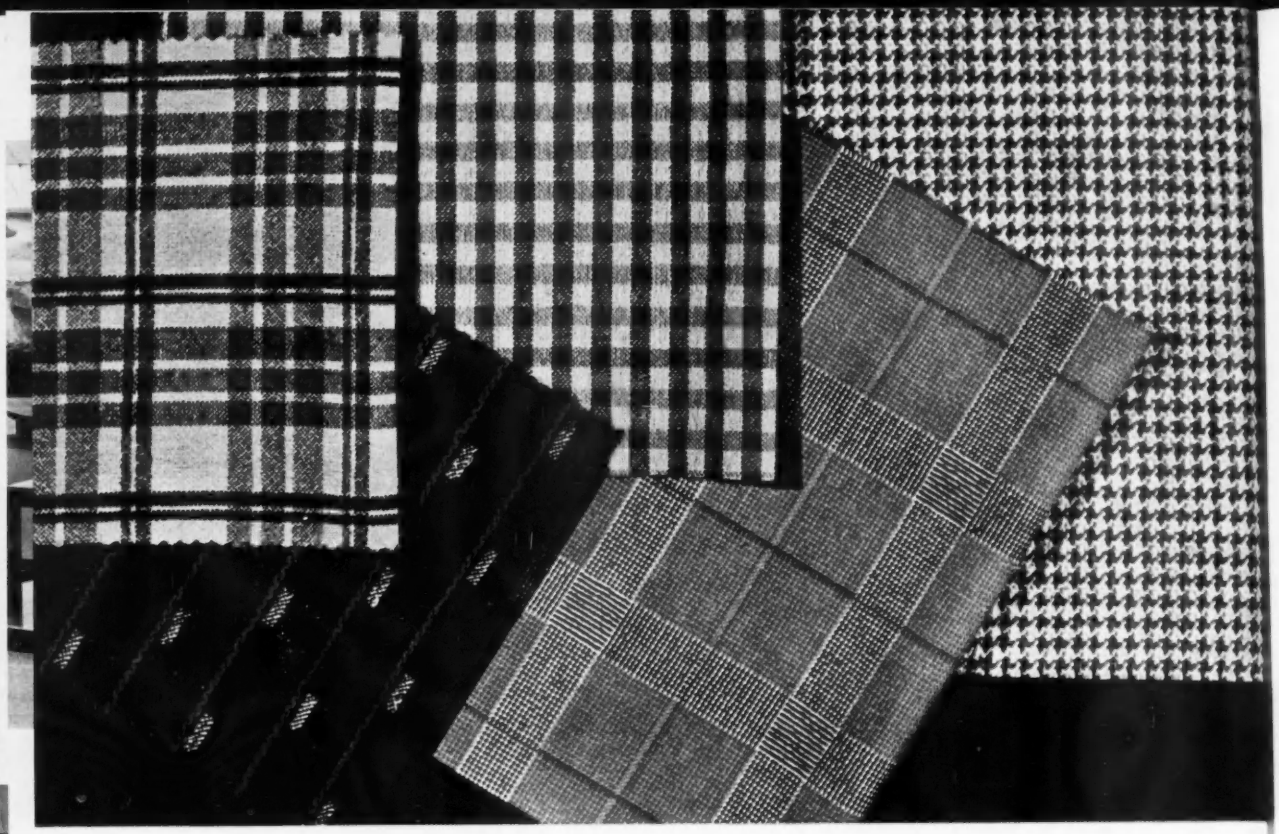
With the entry of the three-piece suit in the early years of the present century, there was a complete decline of the fancy vestings section of the trade. Scotch trouserings, too, have been decreasingly in evidence. On the other hand, from small beginnings sixty years ago, the use of tweeds for ladies' wear climbed into favour with *haute couture* designers between the wars (especially in the late 1920's and early 1930's), and has since gone from strength to strength.

The Scotch trade is both a classic and a "fancy" trade: it thrives on novelty in colour and style, yet—despite regard for local preferences in the different world markets—it keeps faithful to traditional Scottish characteristics.

Textile design must take note of texture, colour and rhythm. In men's wear, texture is an important feature. Fifty years ago Scotch suiting cloths were firm in body, well felted, generally semi-covered in finish, preferably in a soft handling Saxony quality. Weights ranged from 20 to 28 ounces to the yard, 56/58 inches



"Snippets" of six District check patterns of 1907–8. *These have been woven in left twills instead of having the usual twill lines running upwards to the right.* (*George Harrison and Co, Edinburgh*)

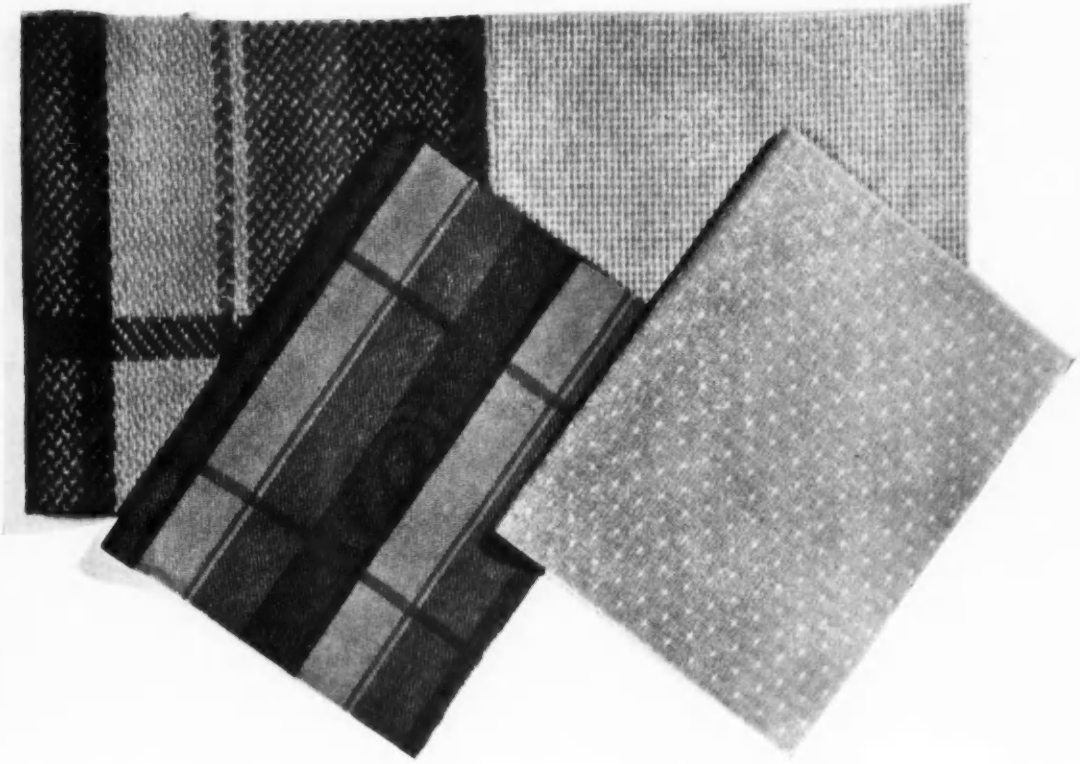


Three crepe tweeds by Edward Gardiner and Sons Ltd, Selkirk; a Scotch worsted and a tweed selected by George Harrison and Co

wide. Drab colours were the rule—slates, olive greens, oatmeal colours and soft browns predominating. Often there was a pleasant bloom, skilful use of neutrals, and some other colour of low intensity introduced for variation. Style favoured a quick rhythm with neat spot and small check effects appropriate to Edwardian taste. At this period, sports cloths still consisted largely of the Scottish District check designs, with their traditional patterns.

Perusal of pattern books from year to year shows decreasing cloth weights—especially in the Spring of 1908, when many 20/22-ounce cloths were taken up. Effects, too, became sharper, with clearer pattern and a more natural type of finish, resulting from less felting. These tendencies, along with the use of brighter colours, were arrested by the 1914-18 war, but were renewed in the early 1920's, with still lighter weights of 16 to 20 ounces for suitings. At this time, the maximum firmness of texture—formerly invariable—gave way to a designed bulkiness and softness in handling, which was obtained with a reduction in cost. This brought out the possibilities of new styles of textural designing which have since firmly established themselves. In turn, the new textures suggested other styles for ladies' wear and extended uses for tweeds.

During the 1920's there was a widening divergence between lounge wear and sports wear in the design of tweeds. In both sections, rhythm was markedly accentuated. Sports-wear design swung to extravagant patterns but by the end of the decade it had steadied into a more sensitive rhythm. Notably twenty-five years ago, the feeling was for vigorous styles, using prominent weave patterns and brighter colourings. At the same time, the use of lustre lines for men's lounge wear became a feature. These had started in 1902 and had been developing haltingly; like the use of colour and rhythm generally, the designing of lustre lines seemed to be striving for a new interpretation. However, during the period of consolidation after 1929, the increasingly sensitive use of



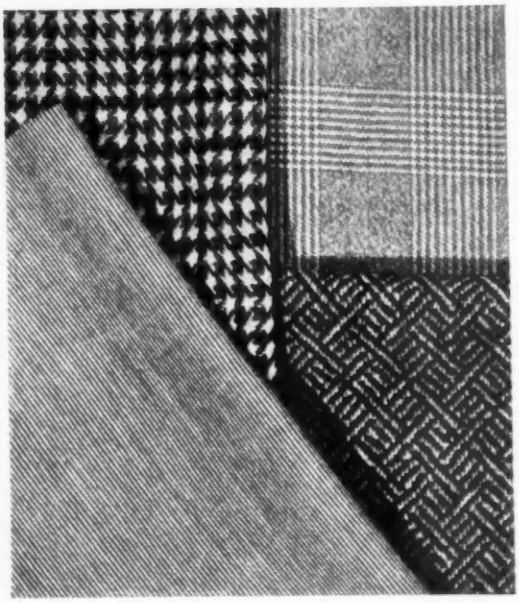
a quietly sparkling lustre was to be seen in lines which delicately caught keynotes of colour proportioned by a subtle use of edge lines and neutrals.

The need was for a new balance between texture, colour and style. New standards of domestic heating, central heating of business premises, and new comforts in transport, together with a recognition that excessive weight of clothing was undesirable, encouraged lighter weights: weights have tended still to diminish, until in 1951 the usual choice lies between 16 and 18 ounces for the British home trade, down to 10/11 ounces for many makes for the USA, though up to 23 ounces for some of the Continental trade.

In cloths for ladies' wear, light weights (14½ to 22 ounces) and broken effects, often in fancy yarns, were prominent in the early years of the century. At first, ladies preferred a light-weight clear-finished men's-wear tweed, preferably in a slightly looser structure and often in lighter tone. Specialist designing of ladies' tweeds developed during the 1920's—largely

Matching pairs and an example of four-fold cloth designing. These matching sets all have one or more colours in common and are designed with differences in texture and pattern for fashioning into different garments to be worn together. Selected by George Harrison and Co

Representative Cheviot and Saxony suitings selected by George Roberts and Co Ltd, Selkirk

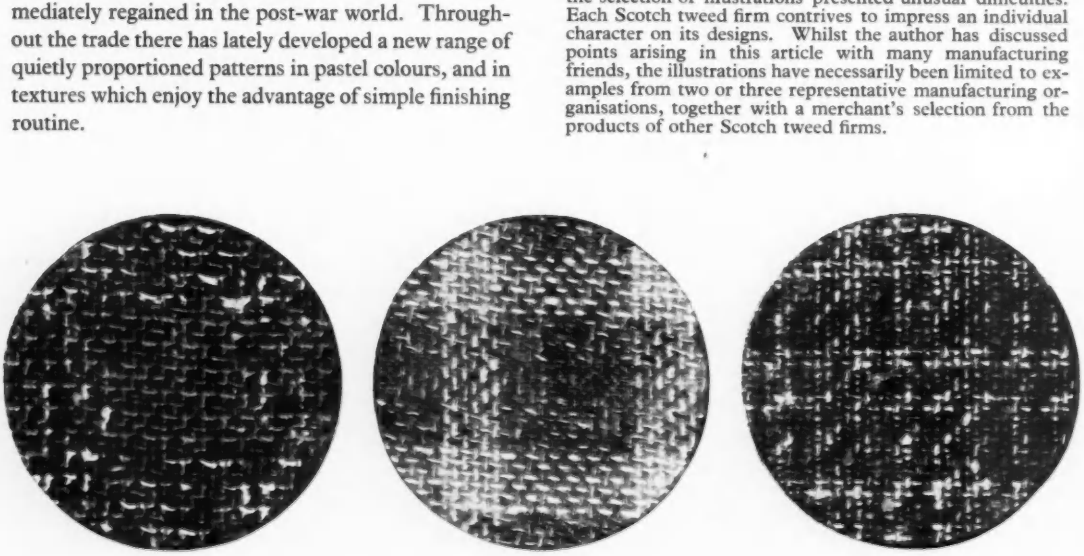


for export, with loosely woven cloths in greatly reduced weights. After touching as low as 4½ ounces in gauze-woven woollens in the early 1930's, the level of weights settled around 10/12 ounces in more satisfactory textures. Cheviot qualities, enforced by wartime austerity, gave way to Saxonies in smooth, fairly firm, clear-finished woollens during the New Look season (1947), yet Cheviots have since continued to attract by their brightness. Many of them are now made in very open textures with comparatively thick yarns, in weights of 10 to 15 ounces.

Recently it has been suggested that, in men's tweeds, designs for lounge wear and for sports wear are tending to come together by force of economic circumstance. The home trade, at least, has been increasingly interested in designs which satisfactorily serve the dual purpose.

In the ladies' trade, with its strong element of fashion, quick changes in styling have been more in evidence. After a decade of restless searching, there emerged by 1939 a specialised use of texture, colour and pattern with a distinctive cadence. During the latter part of World War II, colours became less clear and tones darker, but this minor setback was immediately regained in the post-war world. Throughout the trade there has lately developed a new range of quietly proportioned patterns in pastel colours, and in textures which enjoy the advantage of simple finishing routine.

In a product so diversified in design, from many producers, the selection of illustrations presented unusual difficulties. Each Scotch tweed firm contrives to impress an individual character on its designs. Whilst the author has discussed points arising in this article with many manufacturing friends, the illustrations have necessarily been limited to examples from two or three representative manufacturing organisations, together with a merchant's selection from the products of other Scotch tweed firms.



Light-weight Cheviot quality tweeds for coats, selected by Keddie, Gordon and Co Ltd, Galashiels; representative of the delicate colours now current in tweeds for ladies' wear

Needlework Development Scheme

Scotland has led the way in sponsoring a scheme to raise the standard of embroidery design by the provision of designs which the home-embroiderer can accept as prototypes. This article describes the work which has been done under the Scheme in recent years to bring about closer collaboration between designers and craftswomen on both sides of the Border.

NOW WIDELY KNOWN on both sides of the Border, the Needlework Development Scheme was started in 1934 by the four Scottish Art Centres at Aberdeen, Dundee, Edinburgh and Glasgow and was controlled by a Committee composed of the Directors of these schools. The aim of the Scheme was to improve the standard of embroidery in Scotland by building up a collection of embroideries from many countries which could be studied at first hand by teachers and students.

During the war years, development ceased, but the position was reviewed in 1944 and the Scheme restarted with independent organisation in 1945. Its scope was extended to the whole of the United Kingdom (though its headquarters remain in Glasgow) and its interests were widened to include sewing as well as embroidery. Efforts were soon made to reach needlewomen of all ages in all sections of the community. First, schools and colleges of art received loan collections. Then, as suitable specimens were acquired, secondary schools followed. For the latter, two series of illustrated bulletins were produced, the first called *And So to Sew* and the second *And So to Embroider*: the purpose of these bulletins was to encourage a lively interest in design and technique. In addition, a series of Stitches Booklets in colour was produced, incorporating suggestions as to the treatment of colour and design. Finally, Youth Clubs and Women's Organisations were enabled to borrow collections specially selected for their needs.

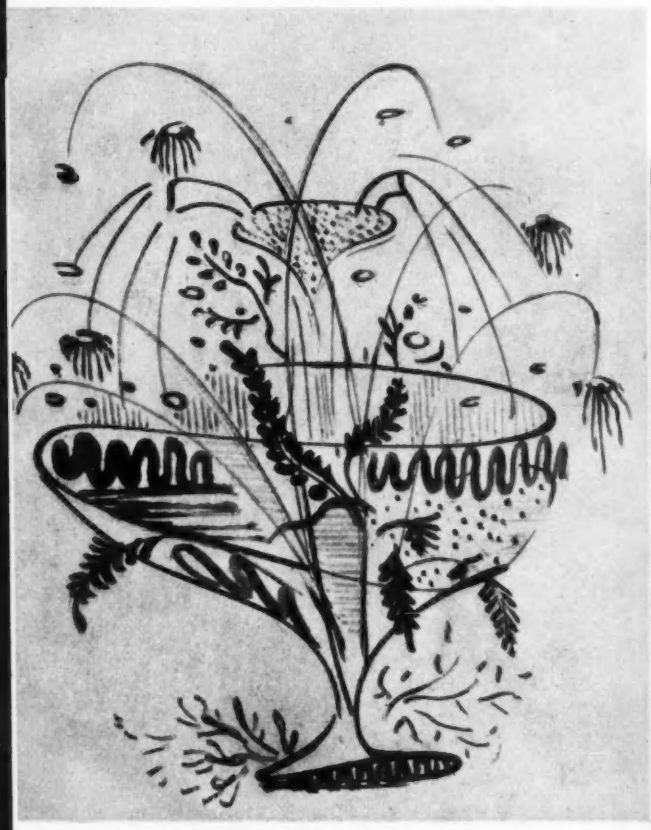
In all phases of its activities it has remained the aim of the Scheme to ally good design to good craftsmanship. The most stimulating examples of this alliance are bought, wherever they can be found, and circulated to all who are interested.

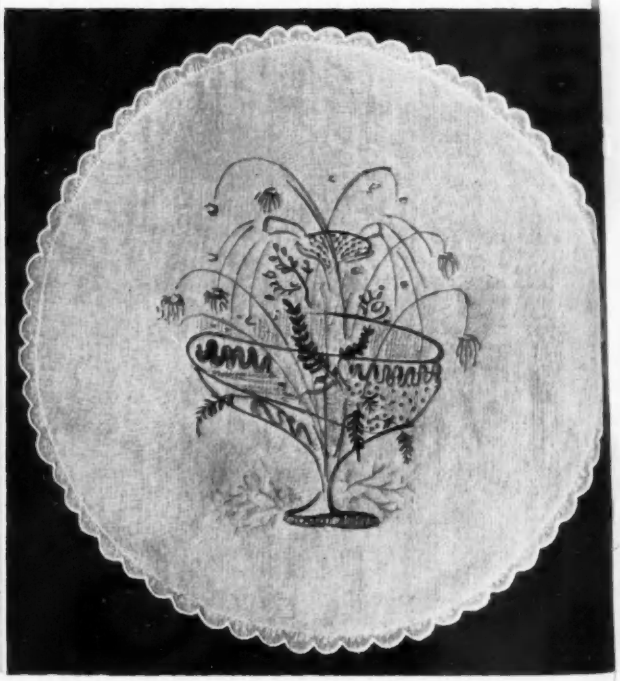
The original task of building up advanced collections for the use of the Colleges and Schools of Art retains its primary importance. By this method the teachers and designers of the future are given the opportunity to see and examine closely embroidery from many countries and from different periods. It has become increasingly evident that contact with past work is not in itself sufficient to stimulate fresh thought on design, and every effort is now made to

This design for a cushion cover was created by a 15 year old girl and worked in white threads on red woollen fabric by Winsome F Douglass

A design for a cushion cover by Iris Hills for the Needlework Development Scheme. It is made in yellow linen embroidered in white by Joan Whayman—one of the "team of talented teachers centred at Bromley College of Art" referred to on page 12

An example of machine embroidery: the brush drawing (left) shows a motif for a table mat—one of many designed by Mary Kessell, which have been widely exhibited under the auspices of the Arts Council. The design was worked by sewing machine on a table mat (below) by Frances Beal





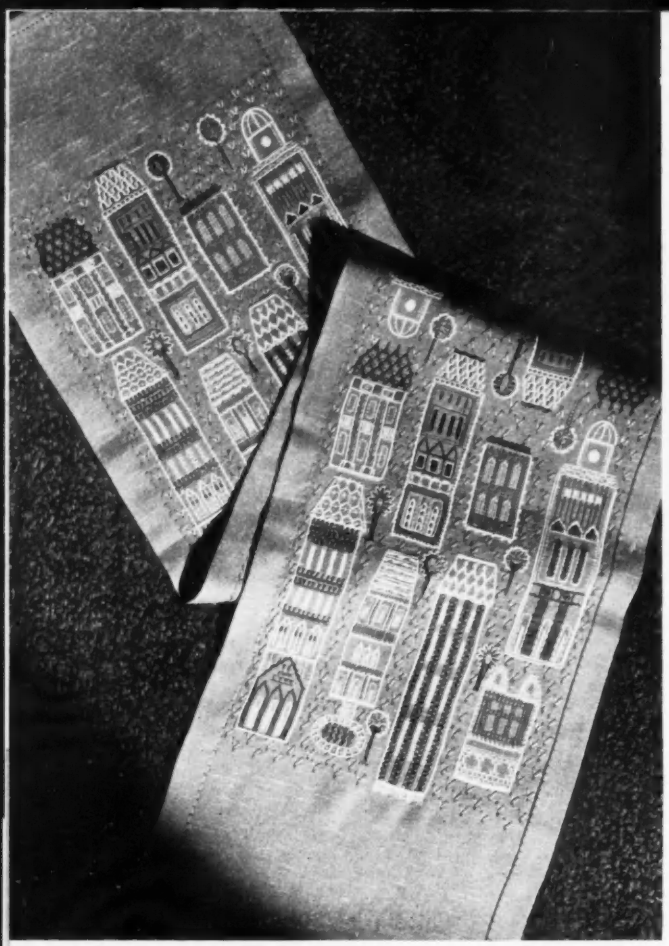
(Above) A kneeling cushion with "Adam and Eve" motif designed by Joan Nicholson for the Needlework Development Scheme. (Above, right) A design for a cushion commissioned by the Scottish Committee of the Council of Industrial Design. Designer, Leonard Rosoman. Embroidered by Agnes Kemp-Smith

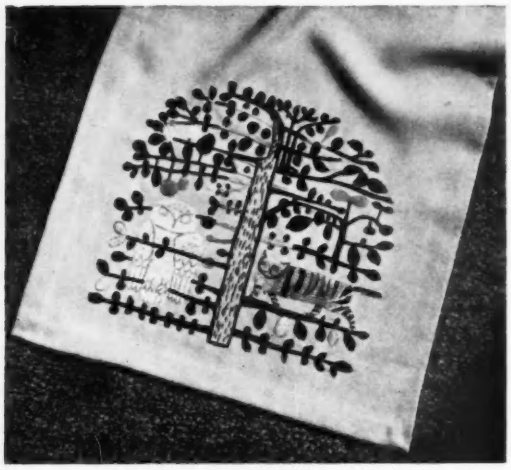
show, side by side with traditional embroideries, good contemporary specimens which give the required stimulus to new generations of designers.

It is relevant to look at the background against which the Scheme is now working. The war years brought a revival of sewing and embroidery. Clothes rationing and rising prices encouraged more and more women to make their own clothes, whilst prolonged austerity created a desire for the enrichment of domestic surroundings through the making and use of hand-embroideries. Embroidery design, as represented by the transfer, was at a deplorably low level, yet much loving care and good technique was being lavished upon these designs.

It must be accepted that many good embroideresses lack the ability to create their own designs, and it was in order to attract the attention of first-rate contemporary designers to this field that the first Needlework Development Scheme embroidery experiment was made. In 1946 Miss Mary Kessell, a young British artist of outstanding ability, undertook to study the craft of embroidery in order to create designs. Although Mary Kessell found that it was not within her scope to master the intricacies of stitchery, she produced a series of outstanding designs, the quality of which was sufficiently encouraging to

An embroidery design by Robert Stewart for the Needlework Development Scheme worked by him on a domestic sewing machine





Chair back
designed by Leonard Rosoman
and embroidered by Isobel McIntosh

A table runner and cushion, both designed by Arthur Fairweather; the runner embroidered by Kathleen Whyte, the cushion by Jessie Dunn. Like the chair back (above, right), they were commissioned by the Council of Industrial Design, Scottish Committee

warrant extensive research and experiment. A successful conclusion was eventually reached through co-operation with a team of talented teachers centred at Bromley College of Art. Of this team Miss Joan Whayman, Miss Iris Hills, and Miss Marion Campbell were hand embroidery experts whilst Mrs Lilian Willey and Miss Frances Beal had done much pioneer work in machine embroidery.

It became apparent that machine rather than hand embroidery gave a closer interpretation of the Kessell designs. The results of the experiment were made into an exhibition which has been touring Great Britain under the sponsorship of the Arts Council.

Following the Kessell experiment, other British artists have been commissioned to create designs for hand embroidery. From the beginning they will work closely with teams of craftswomen to solve all technical problems as their designs are worked out in cloth and thread; in this way it is hoped to achieve outstanding examples which will raise contemporary British embroidery to a new level.

Many organisations have referred to the need for a source of supply for really good embroidery designs in the form of traced cloths or transfers. The Scottish Committee of the Council of Industrial Design has commissioned a number of artists to prepare original designs which would later be produced commercially, and Needlework Development Scheme has been happy to assist this project in its preparatory stages.

Designing for world markets

Scottish engineer-designers play an important part in maintaining Britain's position as "locomotive supplier to the world"—a position which is complicated by the differing requirements of different countries, making mass-production impracticable

by Harold Wyatt, ARIBA, MSIA

NORMAL AESTHETIC STANDARDS can seldom be applied when judging the quality of visual design achieved in a steam locomotive. There is probably no man-made machine which presupposes more compromises, for of all traction units its appearance is the most affected by practical conditions which are not readily apparent to any but the most practised eye. The requirements of a successful motor-car are well known to most people; the aeroplane operates in limitless space; but a locomotive is designed to achieve maximum power within limiting dimensions which were in many cases fixed arbitrarily more than a century ago.

Three main essentials—the boiler, the cylinders and the wheels—dominate the work of the steam locomotive engineer; these must be incorporated in all his designs. Other parts of the engine, though important, are subsidiary, for the boiler size dictates the amount of steam available, the cylinders are the power unit, and the dimensions, arrangement and disposition of the wheels decide the tractive effort, adhesion and speed of the whole unit.

Track gauge, bridge and tunnel clearances, curves, the strength of bridges, the condition of the permanent way, the climate, the fuel available, the chemical content of the water and the distance apart of water tanks, the skill of footplate crews, the aptitude of maintenance and repair staffs, hold or deck sizes of ships available for transport, the lifting capacity of cranes, and many other perhaps less obvious factors decide the final form which the export locomotive will assume.

The British have always had a flair for producing locomotives with good looks and high performance. The fanatic who refuses to recognise that good design existed anywhere but on his favourite home railway, be it Caledonian, Great Northern, or London and North Western, does less than justice to the locomotive industry. The locomotive for South Africa or India on which every pipe and gadget is exposed for easy access by native labour can be—and frequently is—every bit as fine a piece of design work as ever came out of St Rollox or Swindon: similarly, the Emett-like narrow-gauge miniature engine for an Indian plantation may be evidence of as great or even greater skill on the part of its designer than the cleaner classic Stirling single.

Had Isambard Kingdom Brunel, the gifted and far-sighted engineer of the Great Western Railway, won the "Battle of the Gauges," the width of British track would have been 7ft. 0½in. Had the broad gauge been adopted here it is probable that it would have been widely or even universally used abroad—where the majority of countries owe the beginnings of their railway systems to British engineers. The length of early Great Western track exhibited at the Festival of Britain South Bank Exhibition in London, beside a comprehensive display of permanent way built in this country for the railways of the world, illustrates at once the advantages of the broad gauge and the chaos that resulted from Brunel's failure.

To the motor-car or aircraft manufacturer the building of locomotives must seem to be both unmethodical and uneconomical, but in defence of the locomotive builders it can be said at once that the difficulties with which they are faced are not of their making. Their establishment of a great export industry in the face of apparently overwhelming odds

remains one of the great achievements of the age of steam. Early railway promoters, for all their courage, were frightened by the initial cost of the broad gauge, for the addition of an extra 4ft. 8in. in the width of a double line of track was a serious consideration when weighing the cost of buying a hundred miles or more of land. The cost was high in country districts, and it became terrifyingly so in built-up areas where large sidings and similar layouts were required to enable the railways to cope with the calls made upon them. Initially the adverse effect of the decision to adopt the 4ft. 8½in. gauge as standard was not apparent. Railways were still embryonic and locomotives and rolling stock were still in the development stage, so that no-one could foretell that the future would bring about a great increase of traffic and fundamental changes in motive power, tractive effort and speeds.

The changes did, however, occur, facing the designer with the problem of how to compress the greatest possible power or maximum carrying capacity into the limits imposed by track and structure gauge.

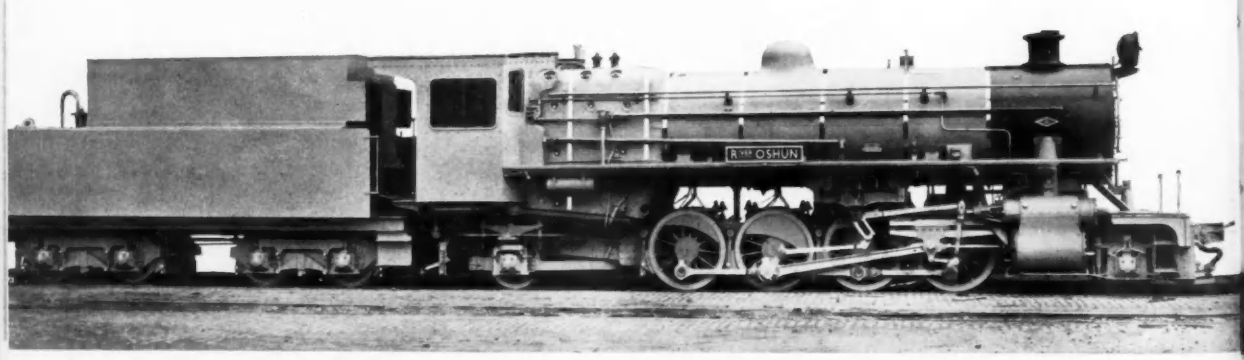
The locomotive industry of Great Britain is centred in four main areas—Scotland, Northumberland and Durham, Yorkshire, and Lancashire—and from them a steady flow of locomotives of all sizes and for all purposes finds its way overseas. The products of the North British Locomotive Co Ltd of Glasgow and of Andrew Barclay, Sons and Co Ltd of Kilmarnock are world-famous—the former building engines of every type and gauge, the latter concentrating on fireless locomotives, locomotive cranes and other special types for a variety of industrial purposes.

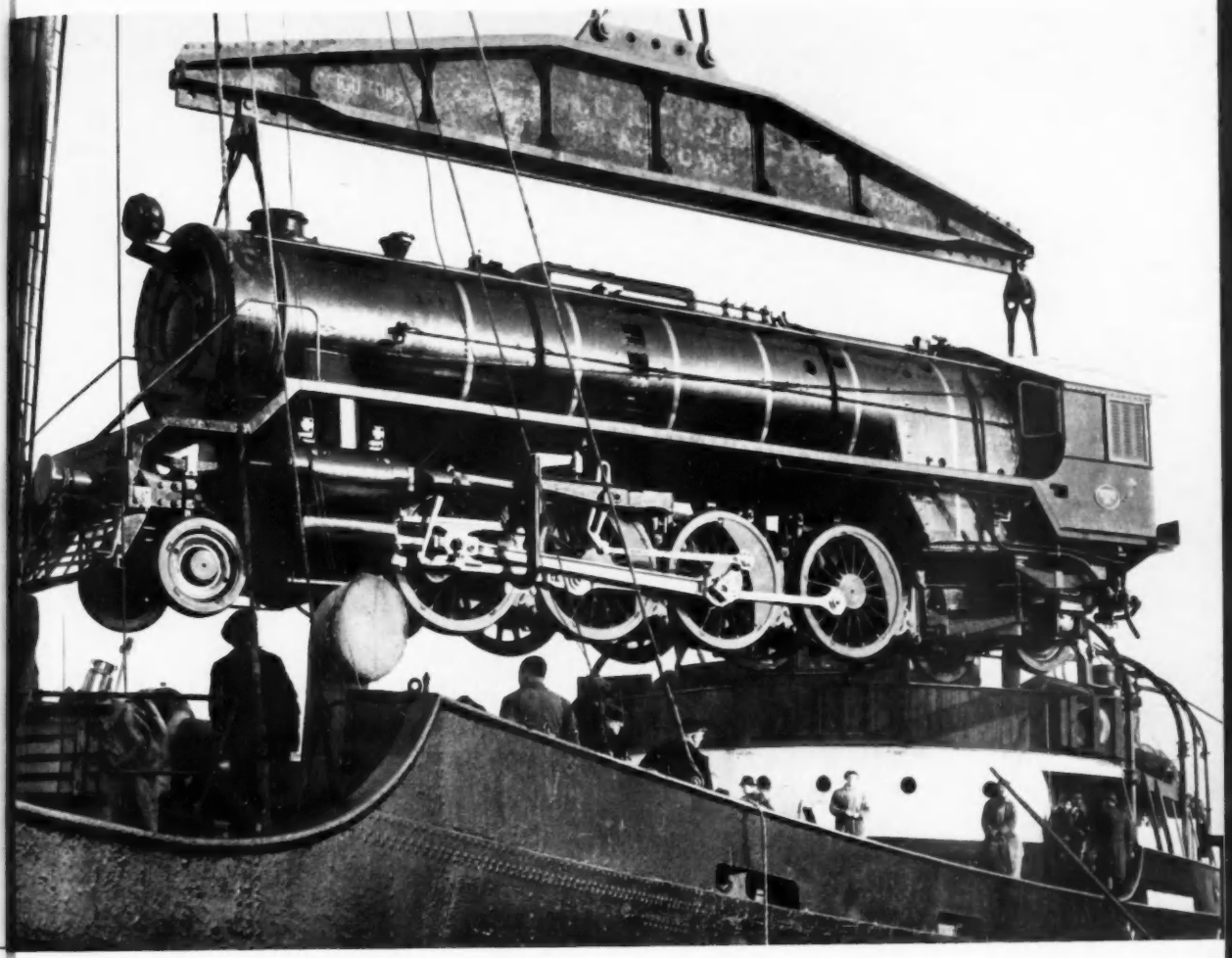
The great variety of track and loading gauges, and the widely differing conditions in the countries to which locomotives are exported, make for difficulties of design and manufacture which are not met with in industries producing other transport units. The motor industry can lay down production lines from which thousands of cars of a standard pattern roll in a year, cars which can be carried quickly and easily to their port of shipment. Similar conditions apply to

The size and weight of the modern export locomotive create special problems which must be weighed equally with those which arise from the purchasers' requirements. They may considerably affect the final design. Some of the difficulties of shipping locomotives abroad are apparent in the picture (right) of a North British WG Class Indian engine being swung inboard the carrying vessel

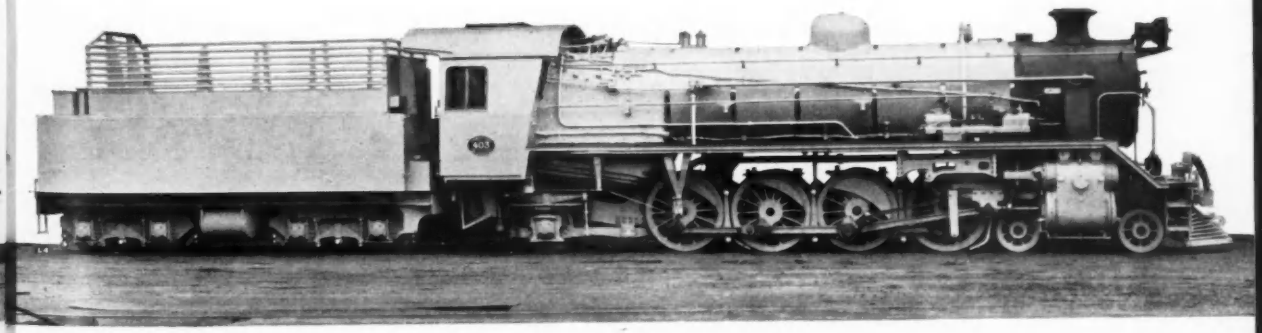
(Below) Two engines built by North British for export to Africa which demonstrate the difficulties inherent in attempts to introduce mass production in the realm of steam. At first glance they are almost identical but, although both are of the same gauge (3ft. 6in.), the Nigerian locomotive weighs 119½ tons and that for Benguela 131½ tons. The tractive force on one is 29,800 lb, of the other 36,100 lb; wheel arrangement, cabs, tenders, fireboxes and many other details are different

2-8-2 "River" class locomotive for Nigerian Railway





4-8-2 11th class locomotive for Benguela Railway

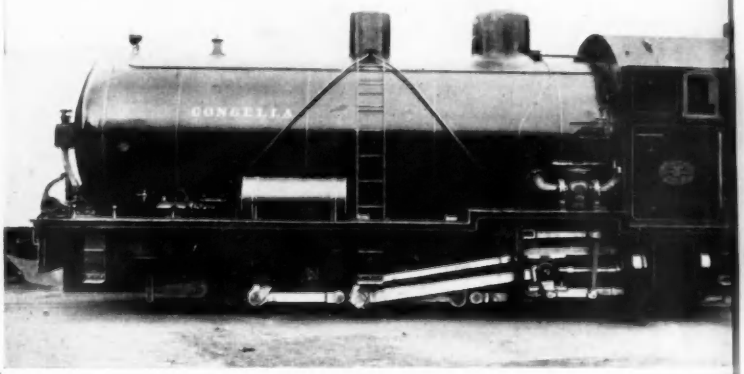


the production of heavy road vehicles other than those of a highly specialised nature. But the locomotive builder must lay down expensive jigs and tools which —such is the rugged individualism of his customers— will serve for only a comparatively small number of engines. When one order is fulfilled, the next on the list is likely to be so different that even modifications to jigs and tools are impossible and a new set has to be prepared.

Even the testing of a locomotive is no easy task. It can be given steaming tests on rollers or on short runs within the works perimeter but it cannot, if of non-standard gauge, be given tests under working conditions. The design must be so worked out that, arrived at its port of unloading, the engine can go into service at once.

At the South Bank Exhibition there is a WG Class locomotive built for the Indian Government Railways by North British. The track gauge in India is 5ft. 6in. —9½in. wider than standard gauge. The transportation of this locomotive from Glasgow to London was in itself indicative of the problems which arise when one becomes locomotive supplier to the world. Too wide for British tracks, too heavy and too high for the bridges on British highways, the engine was transported from the works to the docks on a special motor road vehicle. Lifted from the vehicle into the hold of a ship, it was brought to the Thames; from the docks, once again mounted on a road vehicle, it was carried to the Exhibition site.

It is, then, amid a welter of track gauges, of loading gauges and of individual requirements that the British locomotive industry has maintained its world position —a position well exemplified in the accompanying photographs of engines built by the North British company and by Andrew Barclay.



Britain has always excelled in the design of special-purpose locomotives. This 64-ton fireless steam type, Kilmarnock-built by Andrew Barclay, shows that clean lines and a handsome appearance need not be sacrificed to unusual practical requirements. For power-station use, this locomotive works on steam generated in a static plant and pumped into the boiler-like reservoir. One charge of steam suffices for four hours' work

Shunting locomotives seldom achieve the limelight. This 40-ton Barclay engine shows that basic traditional forms can be made aesthetically satisfying without recourse to design stunts. Its treatment stems directly from that happy marriage of architecture and engineering which characterised our early railways. It is on such sure design foundations, coupled with fine workmanship, that the prestige of Scotland's locomotive industry has been built

MAGIC CARPETS

In the felt-base floor-covering industry, there is scope for a more imaginative design policy

by Peter Cuddon

Intelligence Officer, Council of Industrial Design, Scottish Committee

THE INDUSTRIALIST'S assessment of what the public wants, as the predominant influence in his design policy, could scarcely be more vividly illustrated than in that section of the linoleum industry manufacturing printed linoleum and felt base floor-covering. It caters for a world-wide mass demand coming exclusively from the lower-income groups. Its markets are the third room back facing the railway sidings, the colonial rough-rider, the impecunious native. The Kirkcaldy felt-base square is seldom found in the houses of even the modestly successful. It is essentially the property of the poor—and it has no quality counterpart to influence its appearance; its nearest relative is inlaid linoleum, which is, however, essentially different in kind. Felt base is a waif among materials, denied tactile quality or textural interest. Before printing, it has little more character than brown paper (to which, in fact, it is distantly related).

The industry is faced with an enormous and profitable demand from a market which for the most part has little opportunity to acquire standards of taste; which, until the invention of felt base, was treading mud and stone floors or bare boards. It is hardly surprising that manufacturers from the first realised that the *obvious* solution to the design problem was to simulate more expensive methods of covering floors. If, by printing the felt base, a carpet-like appearance could be imparted, it would be satisfactory enough to the people who would purchase it in Australia, in India, in the mining villages of Britain. From this reasoning has developed a tradition that all felt base should simulate carpets, marble, parquet or tiles. Today practically no other designs exist.

This policy is reflected in drawing-office practice. Almost without exception, designs are sketched on squared paper—usually ten squares to the inch—and the shapes are then resolved by colouring the squares. The curve of a leaf, for example, becomes a series of staggered square dots, and "designing" means building up hundreds of coloured dots, normally within an 18-inch square. The method, besides providing a more or less carpet-like appearance, makes for simplicity in transferring a design to the block, the surface of which is prepared to correspond with the squared paper.

This self-imposed limitation on design is, however, a heavy price to pay for ease of production and a carpet look. Whatever technical advances the industry has made in faster machining speeds and improved inks, in its design policy it has lost ground. Felt-base manufacturers have not always employed the dot system: in old pattern books, *c.* 1900, many designs are composed of freely drawn shapes—and notably fresh they are, compared with the stilted and stylised technique of today.

At a meeting of a firm's selection panel, one sees, spread on the floor of the sales hall, the new designs printed as colour "pulls" on paper, giving a remarkably faithful impression of the finished article. In one session perhaps eight designs are laid down, each proofed in as many as 50 different combinations. The floor becomes a riot of bold, unashamed, primitive colour, orange and putty browns, smarting reds, aching mauves, lush primeval greens. The selection panel—directors, production experts, sales manager and drawing-office chief, their influence lessening in that order—move between the rows, selecting, in what appears to be an arbitrary fashion, this colour and that, and rapidly arriving at half-a-dozen samples for further consideration. In fact the choosing is by no means arbitrary: it is backed by a lifetime's experience in the industry and by a knowledge of regional markets—"Australia likes pink; South Africa prefers blue." Through long experience, the panel is able to pick winners with a confidence and accuracy

continued on p. 31

Clyde-built—and Clyde-designed

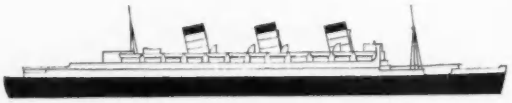
THE EVOLUTION OF ship design is inevitably a gradual process. Every ship at her launching embodies improvements derived from experience in the building and operation of her forerunners, and to gain an overall picture of design progress, it is necessary to consider the sum of these advances over a period of years. Almost imperceptibly, Clyde designers have travelled from the old high-countered stern, "orange-box" superstructures and ungainly funnels, to achieve the grace of line apparent in such vessels as the *Queen Mary*, the *Queen Elizabeth*, and more recently, the *Caronia*, all from the yards of John Brown and Company. Between these three ships, too, there is considerable development: a period of 13 years separates the building of the three-funnelled *Queen Mary* and of the *Caronia*, with solitary funnel and single mast.

No less than in the giant passenger liners, advances are being made in the design of cargo and cargo-passenger ships. Recent Clyde-built cargo vessels have embodied a number of new departures from traditional practice, notably the placing of the crew's quarters amidships, or, sometimes, in the stern, making possible a shortened forecastle and a long, clear foredeck. In the building of oil-tankers, in which the saving of space and the use of light fire-resistant materials are especially important, designers have turned to aluminium alloys for deck-houses, wheelhouses, masts and even funnels.

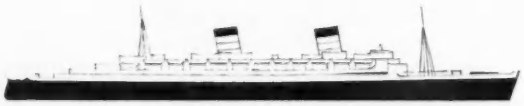
In the smaller Clyde yards, from which emerge all types of small craft, there is often greater opportunity for the designer to put new ideas into practice; frequently it is in the building of such vessels that light alloys and other new materials are introduced for purposes where steel, brass, or wood are the traditional materials. Aluminium lifeboats, developed in Clyde yards, are now widely used on passenger and cargo vessels.

Ship designers are seldom widely known by name. The lines of a hull are usually the work of one man but he rarely seeks publicity, preferring to merge his identity with that of the large team of assistants and draughtsmen who arrange the superstructure, draw the complicated networks of pipes, and find room for everything from the engines to a knife-rack in the galley.

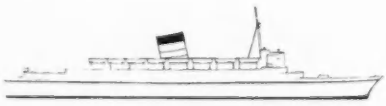
A. N. FORD



Queen Mary



Queen Elizabeth



Caronia

◀ *Three famous Cunarders, shown here in simplified side-elevation drawings, illustrate the gradualness of changes in ship design. The number of funnels has been reduced from three in the* Queen Mary, 1936, *to two in the* Queen Elizabeth, 1940, *and one in the* Caronia, 1949: *which also has a single mast. Her bow, too, is of noticeably different shape*

A combined towing and salvage vessel built by Ferguson Bros, Port Glasgow, for the Union of South Africa. Although this little ship, the F. T. Bates, *is heavily equipped with specialist gear for towing, salvage and fire-fighting, it has not been allowed to mar her clean lines. A feature is the aluminium foremast* ▼

▲ *The cargo and passenger motor ship* Fort Richepanse, *built by Alexander Stephen and Sons Ltd, Linthouse, for the Compagnie Générale Transatlantique—for service between France and the West Indies, carrying fruit and a small number of passengers* (12). *A new departure is the long combined forecastle and bridge, with an overhung navigating bridge and the funnel built into the superstructure*

◀ *The* Clan Sinclair, *a cargo vessel built for the Clan Line by The Greenock Dockyard Co Ltd. Placing the crew's quarters in the stern, instead of the traditional position in the forecastle, has permitted a shortened forecastle and long, clear foredeck. The superstructure, shaped to lessen wind resistance, shows the influence of modern passenger-liner design. The oval cross-section funnel is fitted with a "Centurion's Helmet," designed to carry gases clear of the ship whatever the direction of the wind*

Design education in Scotland

1: *SECONDARY SCHOOLS*

by Andrew Nairn, *Superintendent of Art, Corporation of Glasgow Education Department*

DESIGN EDUCATION is founded on the premises that from all secondary schools comes the buying public of the future, who by their discrimination will help to set the quality of commercial supply, and from the senior secondary schools come the recruits for the Schools of Art—the future designers who will ultimately be leaders of taste.

In the Scottish secondary schools Drawing and Painting, Design, and Art Crafts are studied and practised—the emphasis tending to fall on one of these groups according to the type of school, and the particular interests and skills of individual teachers. The responsible teacher of art may be the graduate of a school of art in either fine or applied Art, and naturally he or she tends to develop most strongly that particular aspect.

In the field of Design, the greater proportion of study is devoted to pattern and colour, and to the crafts growing most directly from these, such as embroidery, weaving, block-printing and the activities broadly classified as book crafts. In these, design is becoming more logical and better related to the character of everyday surroundings and the basic mood of today. As in painting, there is an increase in freedom of invention and less monotony of repetitive formal motifs. The standard, however, varies greatly from school to school and between areas, according to the teacher's degree of craftsmanship and to the presence or absence of adequate equipment and material (in these days a serious financial and administrative problem).

The design and decoration of school buildings is of supreme importance, and it appears that this is realised by the authorities; many obsolete schools have been transformed by stimulating colour treatment: but the theoretical teaching of "good taste" is difficult if not impossible when dealing with children. Examples of good and bad design can be compared and discussed, but the relationship between these and what children see in their homes and in the shops is not always within their grasp. The whole atmosphere of the school and of the art rooms influences them, by assimilation rather than by direct instruction.

Schoolchildren learn most easily by *doing*, and the art crafts, if well directed, can be of considerable help in forming selective judgment. It is recognised (in particular, in the policy of the Scottish Committee of the Council of Industrial Design) that where handcrafts flourish, the level of industrial design tends to be high—the Scandinavian countries bear witness to this. The actual problems of industrial production are beyond the scope of children, except that they may be told the story of how pottery or chairs are made, and in some cases may be taken on a visit to an adjacent factory.

Here and there are centres where crafts reach a standard at which the formative effect on taste is very great, notably where a school is adequately equipped for pottery, weaving or textile printing. Besides the art departments, most Scottish schools have technical departments teaching wood and metal bench-work and technical drawing; here the problem of design is accentuated since the instructors have not been trained in a design school or a college of art. Their strong technical knowledge is often hampered by weakness on the aesthetic side and hesitancy towards contemporary forms: but their undoubted interest could afford a profitable field for specialised advice.

"Appreciation" is now an important word in the curriculum, especially since the recent directive by the Scottish Education Department that *all* pupils should study art throughout their whole course, "at least in the form of art appreciation"; the latter is

interpreted not as the study of fine art alone, but of design from a general and practical viewpoint. The art teachers plan a programme of weekly talks to the older pupils, and as this work expands, it will be necessary to make increasing use of various visual aids as they become available—films, film strips, *Design Folios*, photographs and reproductions, and small exhibitions devised for instructional purposes.

The pottery box exhibition of the Council of Industrial Design and some of the Council's Design Folios *in use in a Scottish secondary school during a lesson in design appreciation*

2: *TEACHERS' TRAINING COLLEGES*

by Sam Black, *Principal Lecturer in Art, The Training Centre, Glasgow*

ONE OF THE most important factors in the formation of taste is the schools themselves—their surroundings, buildings, rooms, colour-schemes. Often, in present circumstances, little can be done to improve these; but it is to be hoped that quality in design will be a foremost consideration when new building takes place.

Whether conditions are good or bad, the task of developing aesthetic standards falls eventually on the teacher. While planned design education is in its infancy in teachers' training colleges, here at Jordanhill the staffs of various departments directly concerned with design (handwork, needlework, domestic science and art) realise the need for greater efforts in this branch of their studies. The first efforts have naturally been directed towards those students who themselves are aware, in a greater or lesser degree, of the importance of good design and the need for quality in all man's undertakings; measures are now being introduced to draw the attention of the rest of the students to the fact that design is everyone's business. This co-operation has taken the form of talks by experts, films and film strips on design, visits to factories. In addition, the students working in wood and metal are encouraged by their instructors to discuss the design of the articles they make with the Art Department staff. Many valuable discussions have arisen in this way.

In order to reach all sections in the College, *i.e.*, those undertaking the three-year course for qualification as teachers in primary schools, university graduates, and subject specialists and students of physical education, an exhibition of all the Council of Industrial Design's visual aids was recently displayed centrally; this aroused much interest. Periodically, too, sets of *Design Folios* are displayed and questions asked to stimulate discussion. Students who attend the Art Department studios for practical work are given a course which has been planned to provide some appreciation of form, texture, pattern and colour.

These are only beginnings; much more has to be done if the training college is to play its proper part and help its students to carry to the schools and their pupils a lively interest in good design. Photographs are of great value in bringing to everyone illustrations of things which are inaccessible, or not readily portable; but there is a need for closer contact with design. Children should not merely see photographs but should also be able to handle and touch if they are to appreciate proportion, scale, shape, form, surface qualities and colour. A College collection of actual articles of good design is envisaged, which will, of

necessity, be composed of the smaller articles and will include fabrics, pottery, glass, books and packaging, etc. It is hoped that the Scottish Craft Centre will be a source for the supply of many examples. The collection must be portable because students will be encouraged to use it in schools, for lessons in design, or to form the nucleus of background displays on various courses. It will be used by art specialist students to aid the appreciation courses for senior pupils and perhaps lead some schools to form their own collections. It will not replace the CoID box exhibitions, but supplement them.

We cannot foster an appreciation of fine and honest craftsmanship in a casual way, nor can we hope to enrich the experience of children by developing their capacity for discrimination through one lesson, or by showing them one set of exhibits. These aims will be achieved only through the honest desires and serious efforts of all concerned with education, and prolonged and studious acquaintance with design. Art and craft specialists foster appreciation through the pupils' own creative experiments; but all teachers have to believe that design education really matters. Until they do so, beauty will not become part of our way of life.

3: *THE ART SCHOOLS: TRAINING TOMORROW'S DESIGNERS*

by W. M. Mason, *Education and Training Officer, Council of Industrial Design, Scottish Committee*

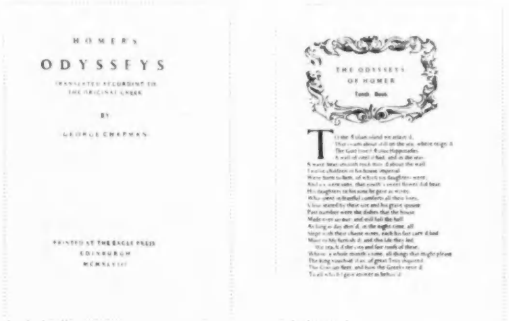
TRAINING IN THE industrial arts has been a subject of discussion in Scotland for many years, and has been quickened recently by the realisation that in the competitive export market good design can be of great economic importance. If we consider the present position of design training in Scotland, we find that the art institutions are expected to discharge many functions. Generally, they include the following:

1 The provision of a general service to the community as a centre of cultural activity and interest, and, in particular, the organisation of classes in a variety of subjects of a recreational and non-professional character.
2 The training of craftsmen-designers.
3 The primary training of advanced designers.
4 The training of those intending to teach, and the guidance of art teaching in schools of general education.
5 The training of those proposing to pursue the fine arts professionally.

Once it is known which field the student wishes to enter, his training should, eventually, specialise accordingly. Failure to do so has led to the complaint from industry that the outlook of these institutions is impractical. In general, the training of a designer is the task of the art school, and is one of its primary obligations; but as the complexities of machine production multiply, and as the importance of design as a factor in them is more widely recognised, it becomes increasingly doubtful whether the art school can discharge the task unaided. Besides the aesthetic, technical and historical aspects of his subject, the designer's education must include an intimate knowledge of machine methods, the development of new materials, and their uses; simple economics; mechanical draughtsmanship and production—subjects which are often of no account in art schools but appear in the curriculum of the technical colleges.

There are four Central Art Institutions in Scotland: two Colleges (Edinburgh and Dundee); two Schools (Glasgow and Aberdeen). In these, the curriculum is divided into (*a*) full-time courses for those who have left secondary schools and wish to take up art as a career; (*b*) evening classes in a variety of subjects; and (*c*)—at two centres only—day-release classes for students employed in trades where part-time study is an accepted part of the training.

With certain exceptions, the emphasis in Scotland has been on the Fine Arts, Architecture, Painting and



EDINBURGH COLLEGE OF ART: *Title page and a chapter-head from an edition of Homer—an example of students' work in the Department of Typography and Book Illustration*

Sculpture: the standard in these has been high. But design departments have generally received less attention; and, apart from training for the craft-based industries and the graphic arts, instruction has related mostly to handcrafts—the value of which must not be underestimated. Furthermore, a considerable number of trained students become teachers.

Now that a large section of industry is beginning to realise the value of the services of an all-round industrial designer, it is evident that the present curriculum does not cater for this type of designer; though some of the foremost designers of today have developed from a craft-based training, many more have been trained as architects, sculptors or engineers. In many industries in which design is of first importance, the designer must share responsibility equally with the financial director, production manager, sales manager and technical staff.

It is an encouraging sign that in particular Scottish schools valiant though limited attempts are being made to tackle the problem. Perhaps if manufacturers in their turn were more articulate in stating their requirements for young industrial designers, a scheme of training acceptable to both would be evolved.

The development of Industrial Design at the Royal College of Art is now being watched with interest. Whether a central institution of this kind or development on a more regional basis is the answer to the problem in Scotland, is a matter for immediate discussion by those responsible for design education.

GLASGOW SCHOOL OF ART: *The tapestry rug, coffee table, table mat and woven fabrics (above) are all the work of students, as also is the silver coffee service (below), which is shown in the "Living Traditions" Exhibition*

DUNDEE COLLEGE OF ART:
Below, students' exercises in the redesign of familiar packages. Right, a coffee service in silver

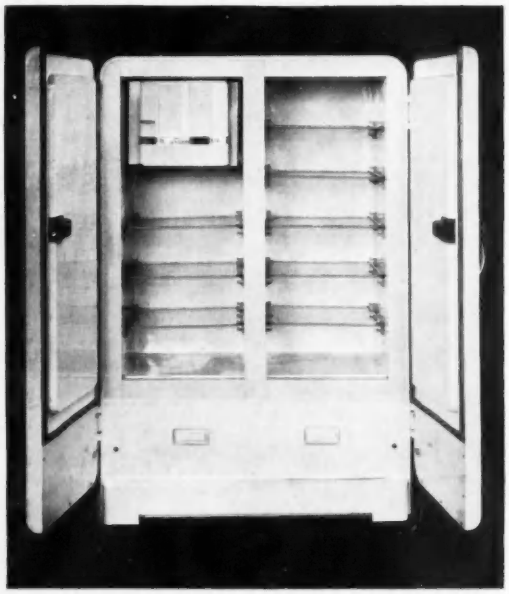
New Scottish products

All-wood swivel chair

THIS CHAIR WAS designed by H. Morris and Co Ltd, Glasgow, for use in the "danger rooms" of the ICI Explosives Division. It was stipulated that the chair must: (1) have a swivel seat, (2) be adjustable for height, (3) contain no metal parts.

The chair is assembled in two parts: the seating unit, consisting of a moulded seat and back connected by a spine; and the leg unit, which has four turned legs meeting in a laminated wood block. A circular grooved pin beneath the seat fits into a corresponding hole in the block, the height of the seat being adjusted by means of a slide engaging in the grooves.

The seat pin and legs are turned in beech; all other components are of birch veneers laminated with urea resin.



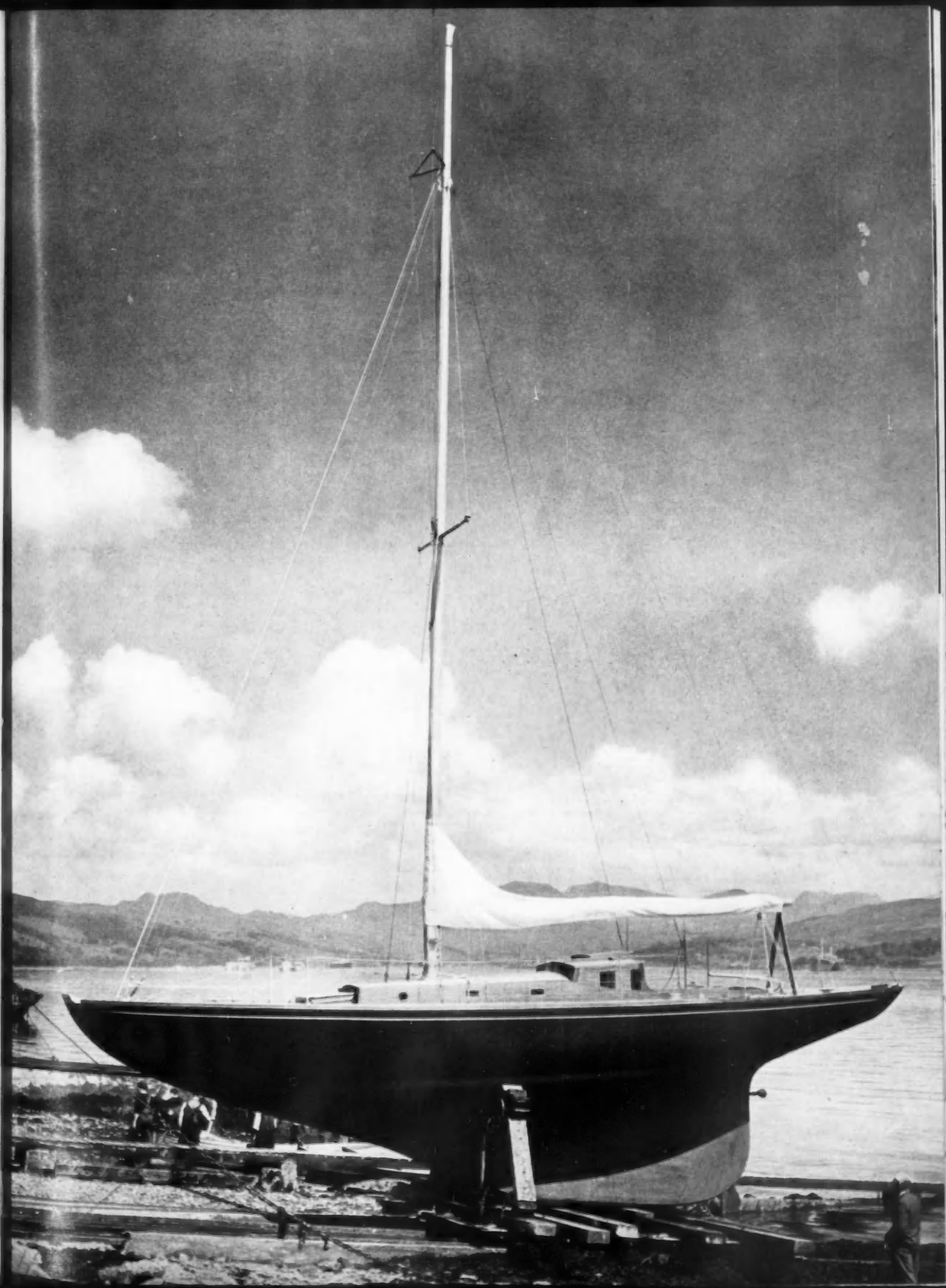
Cruiser-racer

Designed by James McGruer and built by McGruer and Co Ltd, at Clynder, Dumbartonshire, this is the first yacht built in Britain to the new International Rating Rule of the International Yacht Union. She is designed as an 8-metre cruiser-racer: the cockpit, from which the working of the yacht is carried out while racing, is larger than would be required for a purely cruising vessel.

The hull lines are drawn to give the least possible resistance while providing sleeping accommodation for four adults, a cooking stove, sink, W.C., and locker accommodation for living on board. The yacht is fitted with a 10 h.p. Parsons Ford auxiliary engine, with folding propeller.

Steel refrigerator

Intended for use in the catering industry, hospitals and clubs, this refrigerator was designed and built by L. Sterne and Co Ltd, Glasgow. It is fabricated in sheet steel with a white stove-enamelled exterior finish and vitreous porcelain enamel inside. Fitted with twin doors, it has a food storage capacity of 16 cu. ft. There is an unrefrigerated storage bin in the base.



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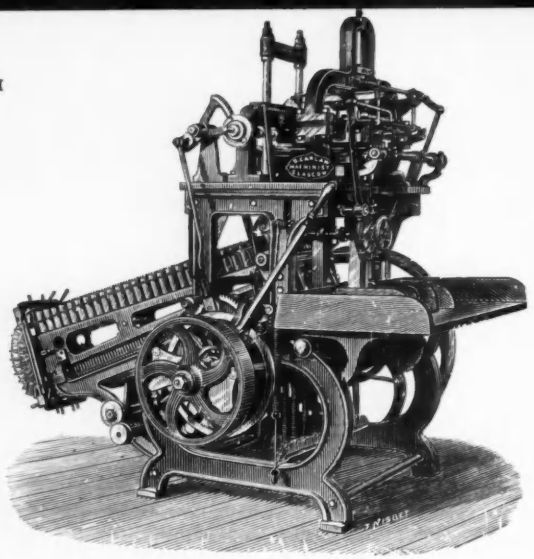

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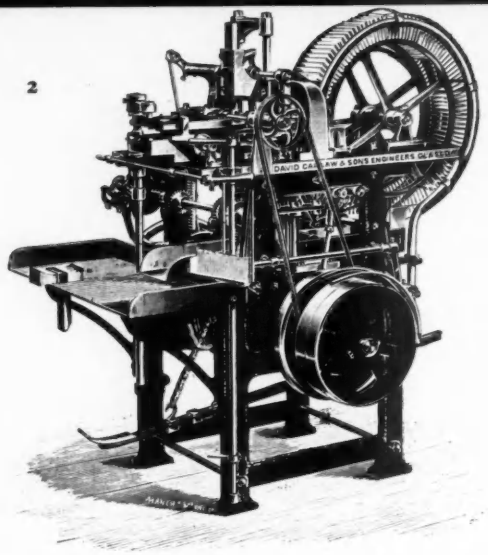

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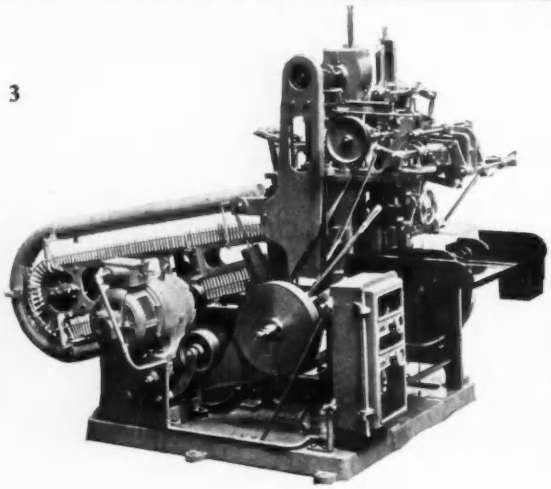

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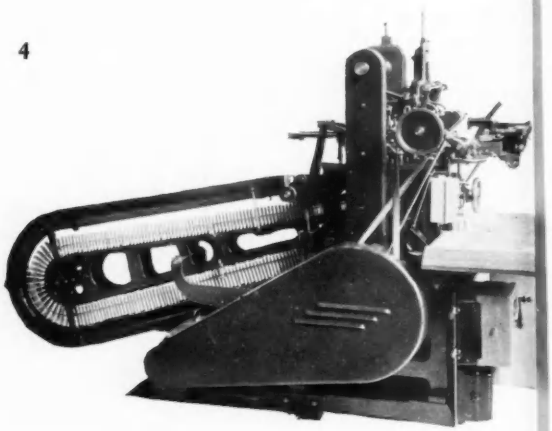


1: One of the earliest machines made by David Carlaw (about 1880)—producing about 100 envelopes a minute. The mechanical motions were effected entirely by cams. As the envelopes were carried forward on the chain conveyor (left), the gummed seal was dried by the action of rotating blades agitating the air about the conveyor.

2: A later machine embodying an improved method of gumming and with a redesigned frame and drying conveyor to save floor space. The means of drying was also more efficient: air was ejected through holes in the piping running on either side the length of the conveyor.

3: Machines of the 1920's showed a considerable advance on their predecessors. Power was provided by an electric motor mounted on the same base as the machine itself: in this model, *c.* 1928, compact design allowed of a simple rectangular casting for the whole sole-plate and certain cams were replaced by eccentrics or chain drives.

Other improvements were the introduction of a rotary belt-driven fan to impel the air through the perforated tubing round the conveyor chain—now returned to its original position—and an adjustable plunging and folding unit for making envelopes of different sizes.

4: Introduced immediately after World War II, this machine was substantially the same as the previous model in general arrangement, though it incorporated several detail improvements. Hitherto, guards had been either non-existent or clumsy—of cast iron; now, sheet metal was used for guards and covers, making the machine easier to keep clean, ensuring safety, and improving appearance.

5: Current model, first produced in 1950. The trend towards a totally enclosed machine has been taken a stage further by redesigning the frame and fitting cast aluminium guards to enclose the main drive and electrical control gear. The neat control panel is noticeable in the view on right.

Evolution in machine design

Scottish firm's part in the development of envelope-making machinery

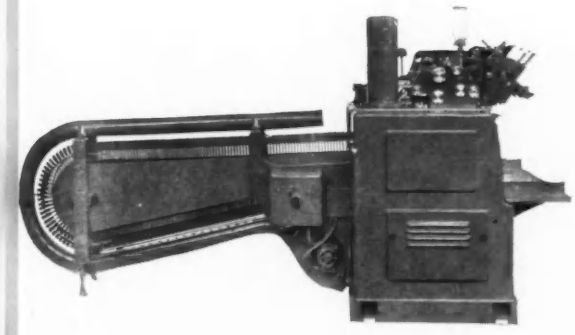
THE BASIC PRINCIPLE of envelope making by machine has changed but little since the first patent for an envelope machine was taken out in London. In the original machine, designed in 1845 by Edwin Hill, of De La Rue, sheets of paper, previously cut to shape, were successively placed over a rectangular aperture of approximately the same dimensions as the finished envelope. A rectangular plunger pushed the paper through the aperture on to a table, forming a crease in the paper round the shape of the finished envelope. Four hinged fingers then swung over, folding the four flaps into place.

An early development was automatic gumming; later, the blanks were fed into the machine mechanically instead of by hand, singly.

With the introduction of the modern envelope, employing a gummed flap for closing, it was necessary to provide a method of drying the gum on this flap. A chain conveyor was therefore installed on which was blown a current of air, and the envelopes passed through this as they were carried forward to the delivery tray. Later improvements were an adjustable mechanism to enable envelopes of various sizes and shapes to be made on the one machine, and—in keeping with the general development of machine-tool design—the introduction of improved driving units.

The first Scottish envelope folding machine was built in Glasgow about 1880 by David Carlaw, founder of the present firm of David Carlaw (Engineers) Ltd, who have since constantly experimented with new designs to obtain faster machining speeds, economy of power, greater reliability, simplicity in use, and improved appearance. From their original belt-driven machine—output, 100 envelopes a minute—has emerged a fully automatic machine, with press-button control, producing 215 envelopes a minute. In this, the use of cams has been greatly reduced by employing an entirely rotary unit for the feed and gumming mechanism, which has the added advantage of allowing continuous production—the blanks can be inserted without interrupting the feed, as was necessary in earlier models. Lubrication has been facilitated by the introduction of ball bearings and self-oiling plain bearings. The motor, now housed inside the main frame, is still accessible for maintenance. A further advance, making the employment of less skilled machine-minders practicable, is automatic press-button control from a built-in switch panel.

5



CASE-HISTORY

Designing exhibition fittings

For flexibility of arrangement, a module system was adopted

WHEN IT WAS decided that a new set of permanent exhibition fittings was required for the Scottish Committee of the Council of Industrial Design, certain necessary features and certain restrictions had to be observed. First, the maximum degree of flexibility was needed, because the Scottish Committee hold exhibitions of very varied types throughout Scotland and every variety of hall is likely to be encountered. Second, the units must be capable of adaptation for exhibitions of all types. Third, they must be fully mobile.

The restrictions were on price and on weight, and the fact that the unit must be sufficiently simple for erection by all and sundry, preferably with only the simplest tools.

With all these points in mind, it was decided that a light scaffolding of metal, coupled with inter-related frames and box units would be most likely to meet the needs of the Committee. Various types of union were designed, but when discussing these with the intended manufacturer it was discovered that a union already existed which required only adaptation to meet the requirements fully. This two-way union was therefore adopted as the basis of the units.

The next question was to decide which was the most useful measurement to use as a module upon which to base all fittings. An earlier unit had a panel 2ft. 7in. in length, and because it was considered that some interchangeability with the old unit was desirable, this measurement became the module for the new. Frames fitted with removable panels were constructed in three sizes, 5ft. 4in. × 3ft. 10½in., 3ft. 10½in. × 2ft. 7in., and 2ft. 7in. × 1ft. 11½in. It will be seen that each frame was related to the other frames, and one, two or four could be used in a given space. In addition to the framed panels, box units were constructed on a free-mitre principle in the two small sizes. These boxes when assembled fit into, and are held in place by, the frames; they are therefore interchangeable with the panels.

Shelf units of three lengths were also constructed.

The metal scaffolding is of half-inch bronzed steel rod in four standard lengths—7ft. for verticals, 5ft. 4in.

continued on page 31

The units were designed by E. R. Aldhouse, formerly Exhibition Officer, Council of Industrial Design, Scottish Committee

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page 31

SHILLIBEER'S OMNIBUS 1829

Paddington to Bank 1/-

On July 4th, 1829, travellers between Paddington and the Bank could board London's first 'bus. Mr. Shillibeer's single-decker was horsedrawn, but this famous omnibus was the last word in speed and, in spite of cobbled streets, in comfort for public road transport. Festival year visitors arriving at London Airport finish their journey in the latest of modern coaches — the "Wayfarer" type built by Harringtons on Leyland "Royal Tiger" chassis This follows today's coachbuilding practice in using aluminium extensively.

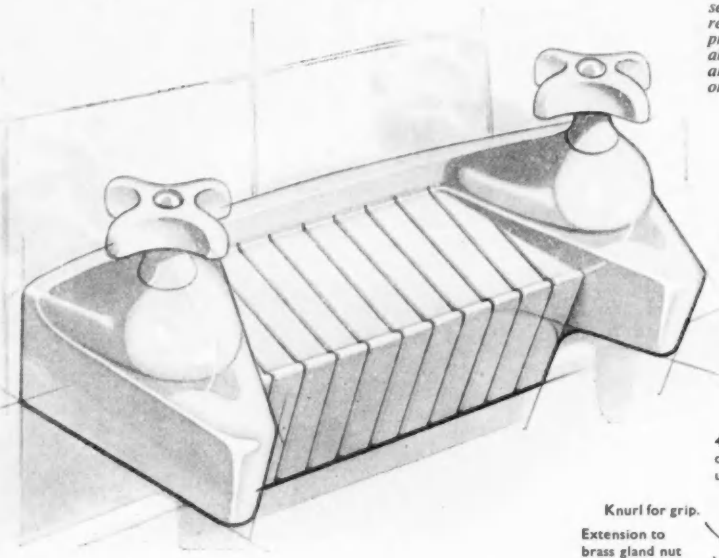
BRITISH ALUMINIUM

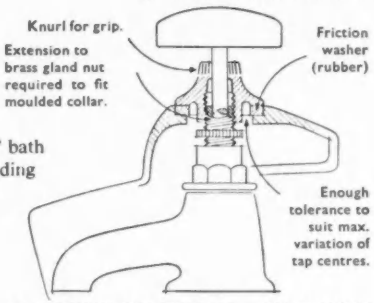
B.O.A.C. MOTOR COACH 1951

THE BRITISH ALUMINIUM CO LTD SALISBURY HOUSE LONDON EC2

Designer's Diary No.1

This is the first in a series of indicative designs for moulded plastics articles by the B.I.P. Product Design Unit. The series seeks to illustrate how technical requirements can be met to produce pleasing, readily mouldable articles. Reprints of these announcements will be supplied on request.




4 small rubber bosses—one at each corner—may be required to take up unevenness of bath surround.
Knurl for grip.
Extension to brass gland nut required to fit moulded collar.
Friction washer (rubber)
Enough tolerance to suit max. variation of tap centres.

SUGGESTED METHOD OF ATTACHMENT

The Product. The bathroom tap unit is designed to 'tidy up' bath faucets, with a saving in production costs. Savings are effected by shrouding the metal faucets, thus enabling them to be reduced to a minimum section, consistent with castability; by eliminating the need for fettling, filing, polishing and plating.

The Design. The main component of the product is long and rather shallow and might have been conceived in flowing curves. This treatment, however, would adversely affect strength. Note, therefore, the drastic changes in form, incorporated to obtain maximum strength and rigidity. Even the small drain channels contribute, forming natural strengthening ribs on the flat underside. The diagram illustrates how the shroud is held in position by a moulded collar screwed down on to the tap. The design is of a simple nature for ease of moulding in straightforward up-and-down moulds.

The Material. 'Beetle' Melamine moulding powder is chosen for its excellent resistance to water, particularly hot water. Nevertheless, some contraction and expansion of the moulding will take place, due to changes of temperature and humidity. This could result in distortion, or even cracking, were not provision made for it by the silicon rubber washer, on which the moulding can 'float' *(see diagram)*.

No polishing for housewives, either, this way. The moulding can be cleaned in a trice with a damp cloth.

The B.I.P. Technical Advisory Service will assist industrial designers and manufacturers who use plastics mouldings in their production processes. Advice is freely offered regarding product styling, mould design, choice of materials and moulding techniques. The Service exists primarily to assist your own designers and technicians regarding those problems peculiar to plastics moulding, with which only a specialist can be completely conversant.

BRITISH INDUSTRIAL PLASTICS LIMITED B·I·P GROUP **1 ARGYLL ST., LONDON, W.1**

'BEETLE' is a trade mark registered in Great Britain and in most countries of the world.

and 2ft. 9in. for horizontals, with some 11½-inch lengths for use as return members where a straight run is required.

The unions consist of the two-way quick release type mentioned, a modified version which permits of a continuous run, and a six-way cruciform union. These, with standard 8-inch diameter metal and 1½-inch turned beechwood balls as finials, complete the units. The frames are hung from the horizontal rods by means of a simple hook. As all the parts are interchangeable, almost any required ground plan can be adopted.

Lighting fittings for both filament and fluorescent lamps have recently been designed for use with the existing materials, and a set of six folding tables to hold the Council's well-known Box Exhibitions has been added, together with a portable stand for publications. All the units are based on half-inch bronzed steel rod or tube, natural obeche frames, and colourful interchangeable panels.

Some of the unit fittings in use at the Chicago Institute of Design Exhibition (Glasgow, 1950)

MAGIC CARPETS by Peter Cuddon *continued from page 17*

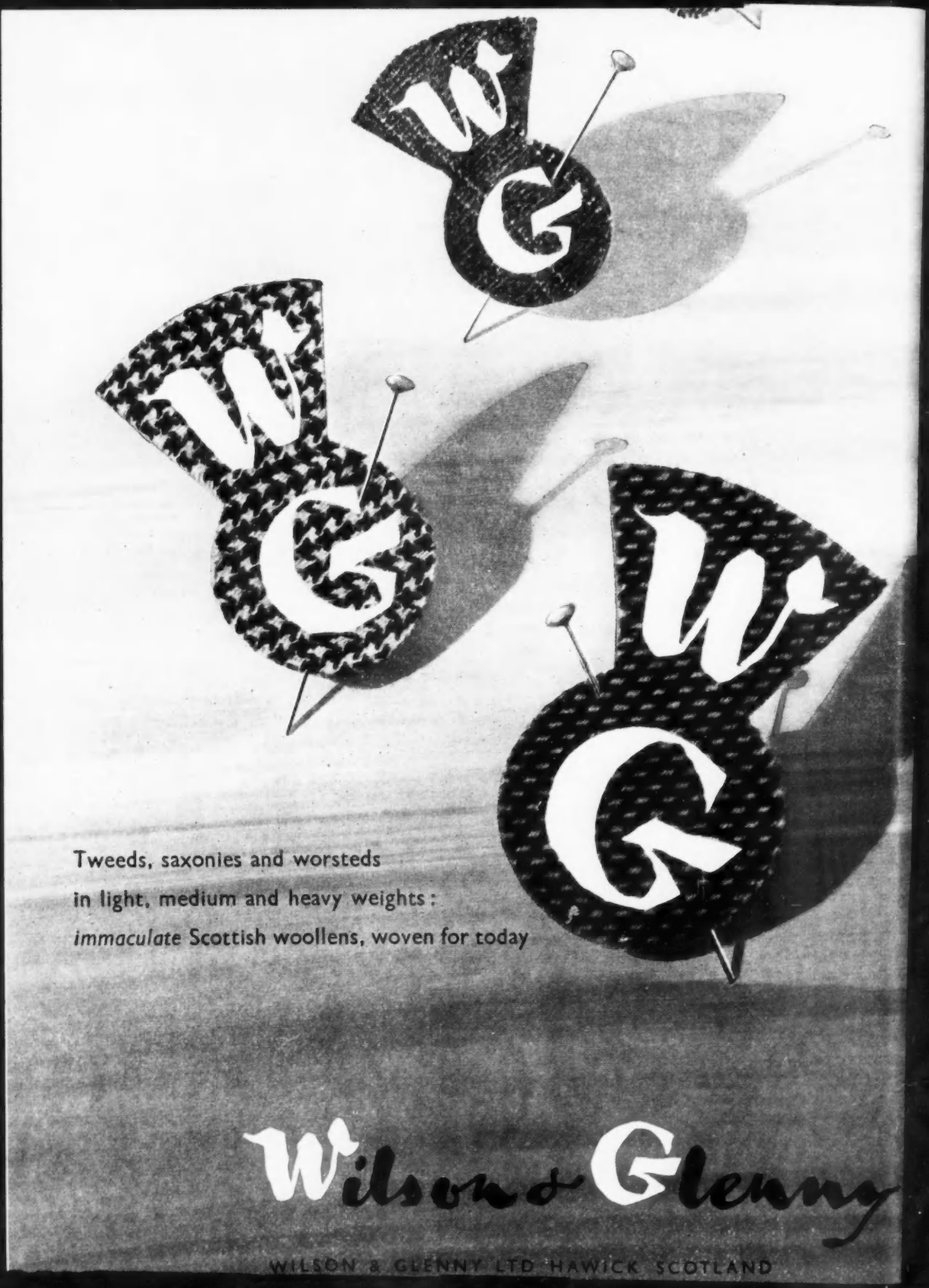
that a racing columnist might envy. Yet one feels that its members have little appreciation of colour, pattern or design, as contributing to the good things of life: "colour" means pink for Australia, blue for South Africa: "design" means a fairly apparent likeness to a carpet known to be selling well.

The panel knows its industry thoroughly; it is efficient, hard-working and commercially successful. Here is, in one sense, an unarguable and satisfactory state of affairs. But—even if attempting to raise the standard of design were not in itself an invigorating policy in industry—there is evidence that this nearly perfect wheel of profitable endeavour could halt. The industry's insistence that its special market would repudiate anything better may not always be true, if in fact it is true now. Despite a comment, in the Linoleum Working Party Report of 1947, that "the present condition of a sellers' market gives the industry an exceptional opportunity for experimenting in design and, to some extent, for actually educating taste without any attendant risk," it is impossible to discover that any serious effort has been made to improve design—and what has not been attempted has yet to be proved.

During the 1930's, there was a sudden demand for jazz patterns—the belated reflection of new trends in the visual arts. The industry was caught unawares; it was forced to parley with Continental designers offering "funny shapes" and to copy these shapes in its own drawing-offices. . . .

Today, there is a growing public awareness of contemporary trends. People who shop in the multiple stores are more ready to buy simple, well-designed furniture and furnishings—when they are offered them. The mass-production clothing industry has dressed all but the poorest to a standard which has largely abolished the outward appearance of class distinction. The belief that the popular market can be sold only the highly-coloured, the excessively ornamental, the essentially vulgar, is no longer accurate.

It may be that the makers of felt base are underestimating the standards of their markets. They might find it a salutary experience if, among dozens of bread-and-butter lines, they included a few experimental designs of a different order, either obtained in competition or commissioned from established industrial designers—and no mention need be made of the square dot. The kindred industries of furniture and textiles have shown the way: manufacturers of printed floor-covering might also reap rewards.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in light, medium and heavy weights:
immaculate Scottish woollens, woven for today
Wilson & Glenny
WILSON & GLENNY LTD HAWICK SCOTLAND

Whisky packaging for export

by ***Barrie Dickson,*** *Press and Publicity Officer, Council of Industrial Design, Scottish Committee*

WHEN THE TRADITION and conservatism which surround the retailing of Scotch whisky are considered, it must appear that the scope for new design in its packaging is severely restricted. It can be maintained that the bottle and label which have identified a particular brand for more than half-a-century are sacrosanct and that their selling power, the accretion of years, must not be endangered by innovation. This is the point of view of many highly effective selling organisations in the industry.

An opportunity for innovation has arisen in recent years, however. Some of the oldest distilleries are no longer content to send their bottles to the market clothed only in the authority of a familiar shape and label. For the Americas at least, they have introduced cartons which combine display value with protection of the bottle in transit. This departure from established practice has been justified by results. In the United States the distinctive coloured carton pulls its weight in the heavy competition of liquor-store window displays and shelves. The design of an outer carton is not tied by tradition, and it is the more disappointing that in few cases has the opportunity been taken to produce a carton of handsome surface design.

The pottery flagon is an early form of whisky container, as charming as it is practical. The examples shown on this page and overleaf are, alas, no longer seen in the home market

To return from the most conspicuous form of whisky packaging to its fundamental—the bottle—it must be noted that while basic shapes have remained unchanged for generations, design has played a part in adjusting them to increased output and to reduction of weight. The extreme example of this is a lightweight bottle which has been designed and produced for whisky exported to Central and South American countries, where custom duties are levied by weight and not by volume. The standard whisky bottle weighs 20¼ ounces (a reduction from the 23 ounces of a few years ago) but this lightweight bottle has been scaled down to 12 ounces without incurring the breakage penalties which might have been expected.

An aspect of whisky packaging which is not affected by the tradition of the industry is the security cap and seal applied by many distillers to make the bottle pilfer-proof and non-refillable. The design of a non-refillable cap which will resist the ingenuity applied to its defeat in certain markets presents a formidable challenge. It must occupy little space and be capable of withstanding the expansion of the contents on export to hot climates. These conditions have been satisfied, and attractive appearance achieved, with a component which is impressive in its efficiency, though no claim is made that it represents finality in a

world where the crime of replacing Scotch with something else definitely does pay.

The oldest of the containers in which whisky reaches the market—the pottery flagon—is still serving the industry, together with its variant the "greybeard," as a means of lending distinction to the whisky exported to clubs and famous restaurants. These flagons have been produced almost unchanged for generations and their lines and inscriptions have great attraction.

Even these do not exhaust the variety of whisky containers. For the very top of the market, a 33-year-old whisky is exported in a cut crystal decanter of Edinburgh workmanship which alone is worth rather more than £7. Introduced to satisfy a demand on the part of the wealthy for a presentation pack of whisky which would be expensive without over-ostentation, the demand has surprised even the distillers, who evidently underestimated the number of tycoons in the United States.

Costly though the decanter is, it has a definite function in emphasising the character and quality of Scotland's most expendable export.

(Above) Pottery flagons made in Scotland for the USA

(Below) In the most familiar form of whisky packaging, glass bottles, some brands are recognisable by their distinctive shapes. Included in the outline sketch below are, at top, Ballantines' and Drambuie; below, Vat 69, Haig's, and the standard shape used for Black and White and many other brands

Within these doors you will find the products of Britain's foremost furniture designers and leading manufacturers. To mention but a few, contemporary designers whose products we always have in stock are Herbert Berry, Robin Day, R. Y. Goodden, David Joel, Howard Keith, Clive Latimer, Neil Morris, Ernest Race and Gordon Russell.

Amongst the furnishing fabrics we are happy to present our selections from Old Glamis, Heal's and Gayonnes' ranges, and, of course, we carry the complete line of Le Klint shades and outstanding examples of furniture from the Scandinavian and other countries.

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Notebook

Challenge to advertisers

"WITHOUT DOUBT, it is in the interest of long-term advertising to raise the standard of consumers' judgment": said Lady Tweedsmuir, MP, speaking at the International Advertising Conference in London in July.

Lady Tweedsmuir, who is Scottish President of the National Council of Women, placed some of the responsibility for public taste squarely on the shoulders of the advertising profession. "I believe the consumer public is really searching for guidance in standards of taste," she said. "Has not public demand reached a stage when they would appreciate finer design, if they were deliberately given the lead? Today mass production has almost entirely taken the place of the individual craftsman. It therefore places a great responsibility on the manufacturer (and advertiser) to guide the public in the designs for the class of goods he supplies. Consumers are not entirely responsible in this matter, because they have to accept what is offered from a range of goods.

"Reaction, and the uneasy peace in which we live at the moment, do not entirely explain the much wider appreciation of the beautiful that has been shown by the public in this country during the last five or six years. Exhibitions or displays of art in any form draw large crowds from people in all walks of life. Advertisers can safely take courage and deliberately lead the public towards good design, even at a price."

Distribution costs

The speech made by Sir Geoffrey Heyworth, Chairman of Lever Brothers and Unilever Ltd, at the Company's annual general meeting, was interesting for the unusually concrete information about marketing costs which it contained: still more interesting if read in conjunction with Lady Tweedsmuir's comments on the advertiser's responsibility.

Sir Geoffrey pointed out that in the main markets of Western Europe the costs of distribution varied considerably for different types of commodity. For Lever's leading brand of margarine they amounted to 23.7 per cent of the price to the consumer, for hard soap 30.7, for toilet soap 47.3, and for toothpaste, "mostly sold by chemists, who have to provide elaborate services," 62.7 per cent.

The cost of advertising—again expressed as a percentage of the selling price—varies appreciably for different commodities and for similar commodities in different countries. The following figures were quoted: Blue Band margarine in Holland, 1.2 per cent; Sunlight soap in Holland 1.6, in the United Kingdom 3.2; soap powder in France 5.6, in the United Kingdom 6.2, in the United States 12.6. Sir Geoffrey Heyworth pointed out, however, that the high percentage devoted to advertising in the United States is to some extent offset by the lower percentage profit-margin on which the American retailer operates.

British silver on show

Two Festival exhibitions have recently been held at Goldsmiths' Hall, organised by the Worshipful Company of Goldsmiths. The first, an exhibition of the historic gold and silver plate of the City of London, was held in May and June, and during these months a fabulous array of antique plate was on view, including exhibits such as the Whittington spoon, dated about 1400, the gold cup presented by Henry VIII to the Barber-Surgeons Company, and the Falstaff Cup, 1590, traditionally said to have been used by William Shakespeare.

There followed an exhibition of British silverwork of 1920–51. Tradition is strong in the craft of the silversmith, and traditional forms and methods of work limit any drastic change in design. The silversmith today depends more than ever on commissions, but whereas formerly they came from private individuals, the present-day patrons are public bodies and large industrial concerns. Several of the exhibits were commissioned by firms such as Courtaulds, British Nylon Spinners, Boots, W. H. Smith and Son, and the English Electric Company to commemorate the Festival year. Interesting exhibits which deserve special mention were a tea-set designed by R. Y. Goodden and made by Leslie Durbin for the Royal Pavilion in the South Bank Exhibition, a rose bowl by J. E. Stapley which won the Goldsmiths' Company's competition for a masterpiece to commemorate the Festival, and a graceful candelabrum by E. C. Clements for Grosvenor House.

Trophies for display men

In connection with the forthcoming National Display Exhibition (DESIGN

From the Goldsmiths' Hall exhibition: Festival candelabrum for Grosvenor House by E. C. Clements

Presented by Display *magazine: a cup for the best window display, designed and made by R. E. Stone*

No 26 page 30), *Display, Design and Presentation* has organised competitions for window display, advertising display units and screen process printing. An opportunity for patronage of the silver craftsman has been taken; the silver cup seen on p. 37 was designed for presentation to the winner of the first competition and replicas will be made for winners of the two other competitions. It was designed and hand-made by Robert E. Stone.

Competitions

There are three new sections—for the design of domestic gas appliances, men's wear fabrics, and plastics—in the latest of the RSA's annual Industrial Art Bursaries Competitions. A bursary of £150 in value is offered in each section. The closing date for receipt of entry forms is 15 October; students can obtain further particulars from the Secretary of the Royal Society of Arts, John Adam Street, Adelphi, London WC2.

A competition for manufactured jewellery, silver and plate is announced by the Design and Research Centre, Goldsmiths' Hall, Foster Lane, London EC2. The closing date is 30 October. Only made-up goods—either prototypes or production models—are eligible.

Design for economy

Shortage of materials is making itself felt in industry on both sides of the Atlantic. *Machine Design*, USA, devotes three pages of its July issue to "before and after" illustrations of tractor components redesigned by the Caterpillar Tractor Co. The comment is made that: "Designing to suit the most practical method of production available . . . means not only lower costs in dollars and cents but also fewer man-hours of labour and, most important, real savings in valuable materials."

One example illustrated is a support bracket which was formerly cast in steel but is now formed and welded; the change has saved 37 per cent in cost and three pounds' weight of materials, besides eliminating certain machining operations.

In brief . . .

The Council of the Royal Society of Arts has made two new appointments to the distinction of RDI (Royal Designer for Industry) and honorary RDI respectively: Laurent Giles (yacht design), Walter Dorwin Teague, USA (general industrial design).

Hugh Casson, MA, FRIBA, who for the last three years has been Director of Architecture of the Festival of Britain, has been appointed Reader in Interior Design at the Royal College of Art. The Department of Interior Design is a new one, intended to train professional practitioners in this subject.

* * *

The Chubb door in the Power and Production pavilion at the South Bank Exhibition has been bought, we learn, by a Canadian insurance company.

* * *

Finmar Ltd, 14 Holbein Place, London SW1, announce that they have been appointed agents in Britain for the light fittings made by Arteluce, of Milan.

Production note

The line drawings on pages 18 and 34 of this issue are by Peter Battersby, ARCA; the scraper-board drawing on page 28 is by Eric R. Aldhouse.

The type used for main headlines on pages 9 and 24 is Perpetua italic (designed by Eric Gill for the Monotype Corporation) in contrast with the Perpetua bold roman used on other pages.

the skill of the designer . . .

depends, not only on creative imagination, but also on a sound knowledge of new materials, methods of construction and equipment. This is where the Scottish Building Centre can be of assistance to you. At 425 and 427 Sauchiehall Street, Glasgow, is a permanent exhibition affording unique facilities in Scotland for seeing all types of construction and materials under one roof. Open weekdays, including Saturday, 9 a.m. to 5 p.m. Wednesdays, 9 a.m. to 9 p.m. You are invited to call, or to telephone Douglas 0372. Free technical information service.

Scottish Building Centre, Glasgow

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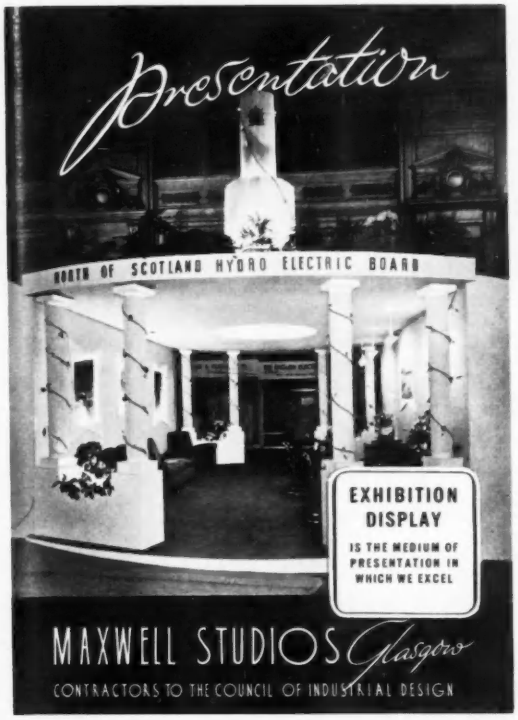
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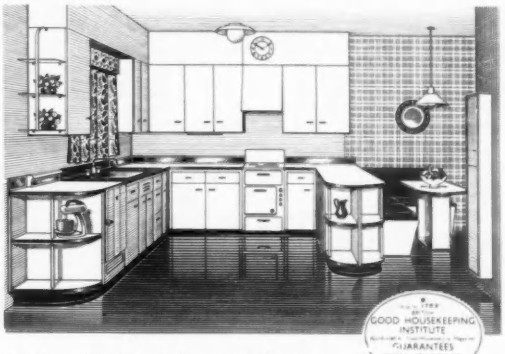

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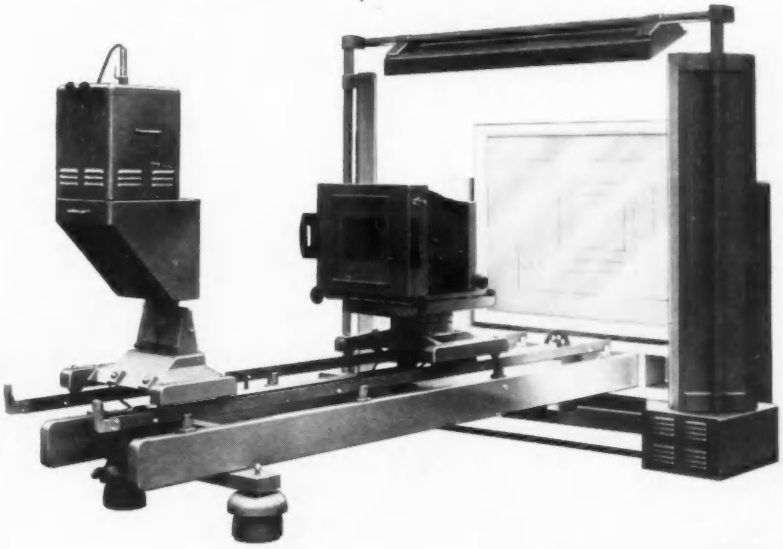

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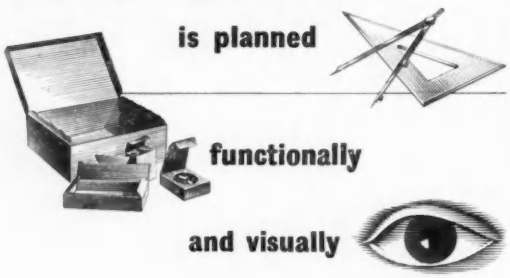

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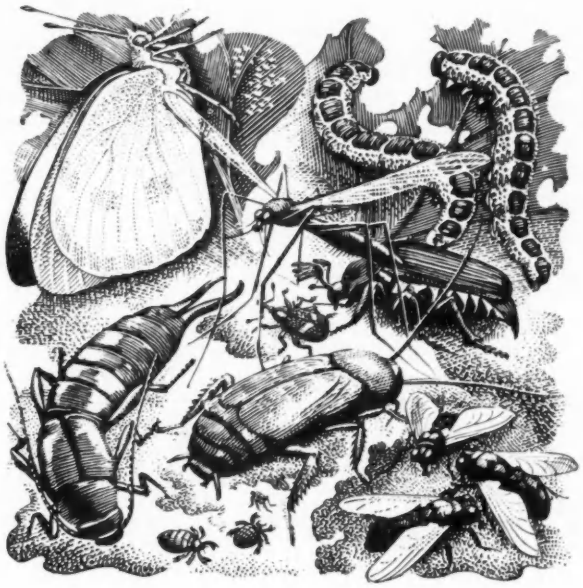

ARSENIC

Arsenic is a steel-grey, brittle, crystalline substance that is sometimes found free in nature. It also exists combined with sulphur or oxygen as an impurity in the ores of lead, copper or gold, and is produced commercially as a by-product of winning these metals. By far the largest producer is a mine at Boliden in the North of Sweden, but arsenic is also recovered during mining operations in Australia, Brazil, Canada and the United States. Arsenic may suggest weedkillers—or even "Old Lace"—but, though a large amount of the world's output is used for killing weeds and insects, it is also employed in many other ways. It is used, for example, in glass making, and by the textile industries in connection with dyeing and calico printing. Arsenic is also an ingredient of some sheep dips, wood preservatives and medicinal preparations.

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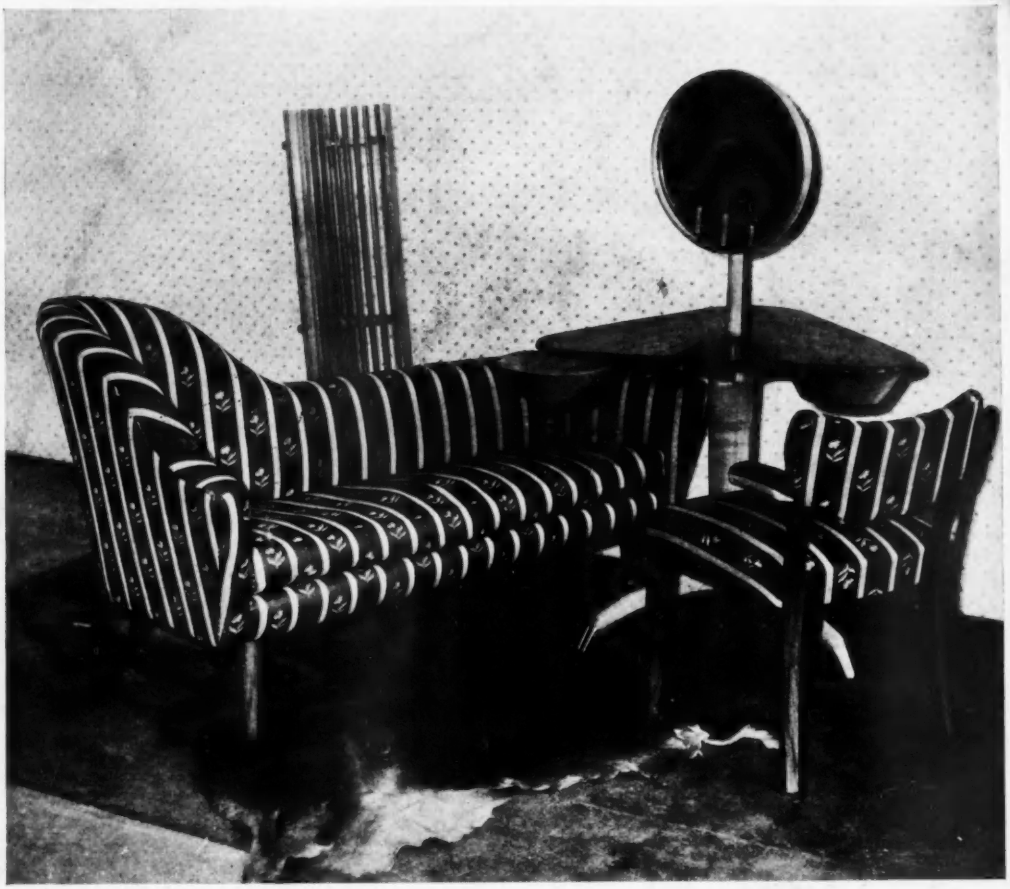

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